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Final Report: Results of the 2006 Investigation of Potential Contamination at the Former CCC/USDA Facility in Ramona, Kansas

Environmental Science Division

USDA
United States Department of Agriculture

Work sponsored by Commodity Credit Corporation,
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Final Report: Results of the 2006 Investigation of Potential Contamination at the Former CCC/USDA Facility in Ramona, Kansas

by
Applied Geosciences and Environmental Management Section
Environmental Science Division, Argonne National Laboratory

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United States Department of Agriculture

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Contents

Tables

Figures

Notation

AGEM	Applied Geosciences and Environmental Management
AMSL	above mean sea level
BGL	below ground level
BTEX	benzene, toluene, ethylbenzene, and xylene
°C	degree(s) Celsius
CCC	Commodity Credit Corporation
CD	compact disc
CLP	Contract Laboratory Program
COC	chain of custody
CPT	cone penetrometer
1,2-DCA	1,2-dichloroethane
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
gal	gallon(s)
GC-MS	gas chromatograph-mass spectrometer
hr	hour(s)
in.	inch(es)
KDHE	Kansas Department of Health and Environment
LUST	Leaking Underground Storage Tank
MCL	maximum contaminant level
µg/kg	microgram(s) per kilogram
µg/L	microgram(s) per liter
µS/cm	microsiemen(s) per centimeter
mi	mile(s)
NAD	North American Datum
NAVD	North American Vertical Datum
PEL	permissible exposure limit
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
RBSL	risk-based screening level (Kansas Tier 2)
RPD	relative percent difference
RWD	Rural Water District
SDG	sample delivery group

TOC	top of casing
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VOC	volatile organic compound

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Executive Summary

The investigation reported here was conducted by the Commodity Credit Corporation of the U.S. Department of Agriculture (CCC/USDA) in 2006. The investigation addressed carbon tetrachloride contamination on the former CCC/USDA grain storage facility at Ramona, Kansas. The results clearly demonstrate that only minimal contamination is associated with the past use of carbon tetrachloride on the former CCC/USDA property. No soil contamination was detected at concentrations above Kansas Department of Health and Environment (KDHE) risk-based screening level (RBSL) Tier 2 standard of 200 µg/kg for the soil-to-groundwater protection pathway. Carbon tetrachloride concentrations in groundwater above the RBSL and maximum contaminant level (MCL) value of 5.0 µg/L were detected in only two samples, collected at adjacent locations on the southeast part of the property. The relatively low concentrations detected and the limited areal extent of the contamination demonstrate that *no imminent threat* exists on the former CCC/USDA property to warrant remediation.

The soil and groundwater contamination detected on the former CCC/USDA property is clearly separate from contamination detected at off-site locations. The carbon tetrachloride and chloroform contamination in groundwater (at concentrations above the RBSL and MCL value) associated with past activities on the former CCC/USDA property is contained within the property boundaries. Data collected independently by the KDHE in 2006 validate these findings and, furthermore, provide additional evidence that the sources identified on the Co-op property (west of the former CCC/USDA property) are separate from the comparatively minor results of past activities on the former CCC/USDA property. The KDHE concluded in its 2006 report that the sources are separate and that the Co-op is the principally responsible party for the carbon tetrachloride contamination detected during its 2006 investigation.

1 Introduction and Background Information

The 2006 investigation of contaminant sources at Ramona, Kansas, described in this report, was implemented on behalf of the Commodity Credit Corporation of the U.S. Department of Agriculture (CCC/USDA) by the Environmental Science Division of Argonne National Laboratory. The investigation was conducted at the request of the Kansas Department of Health and Environment (KDHE). The request was made in a meeting attended by representatives of the KDHE, the CCC/USDA, and Argonne at Topeka, Kansas, on June 15-16, 2005.

The CCC/USDA investigation was designed to (1) determine the source and extent of previously identified carbon tetrachloride contamination in groundwater and (2) generate sufficient data to support recommendations for future actions. The ultimate goal is assignment of *No Further Action* status to the Ramona site, in accordance with the Intergovernmental Agreement between the KDHE and the Farm Service Agency of the USDA.

1.1 Investigation Goals

Five investigation goals were proposed in the site-specific *Work Plan* for the Ramona investigation (Argonne 2005). The *Work Plan* was approved by the KDHE on December 2, 2005 (KDHE 2005a). The goals were as follows:

1. Determine the subsurface contaminant conditions on the former CCC/USDA facility.

2. Determine the horizontal and vertical extent of contamination associated with any potential source areas identified on the former CCC/USDA facility.

3. Establish the current contaminant levels in groundwater samples from existing and newly installed monitoring wells.

4. Verify the groundwater flow direction through initiation of long-term monitoring.

5. Investigate subsurface contaminant conditions on adjacent properties if data indicate that the contamination associated with the former CCC/USDA facility migrated off the property or if contamination from a source outside the property is migrating onto the former facility.

This report details and interprets the data collected during the CCC/USDA's 2006 investigation at Ramona. The investigation met the goals defined in the *Work Plan*.

1.2 Background and Previous Investigations

1.2.1 Background

Ramona, Kansas, is a small rural town with 94 residents (2000 Census). Located in the north-central portion of Marion County, Ramona is 104 mi southwest of Topeka, Kansas, in the SE 1/4 of Section 2, Township 17 South, Range 3 East (Figure 1.1). Grain storage has occurred over the years at multiple locations in Ramona, including the former CCC/USDA facility, the facility operated by the Tampa Cooperative Association (Co-op), and several privately owned locations along the east and south edges of Ramona (Figure 1.2). The Co-op operates on the Union Pacific Railroad right-of-way.

From 1950 to 1966, the CCC/USDA operated a grain storage facility on property in the southeast part of Ramona. Appendix A contains property documentation. Figure 1.3 shows the former CCC/USDA property in 1963, when 21 grain bins were present. No structures remain on the property, and the land is currently used for agriculture purposes, specifically brome production. Figure 1.4 is an aerial photograph of the property in 2002.

The principal water source for Ramona residents is the Marion County Rural Water District (RWD) #1. This water supply source became available in September 1995 under an emergency grant from the USDA Farmers Home Administration. The water is delivered to Ramona via a connection to the RWD #1 in Tampa, Kansas, about 5 mi southwest of Ramona. Before the connection to RWD #1 was established, all Ramona residents used private water wells for their drinking water supply.

The existing monitoring wells at Ramona are typically 38-53 ft deep. Exceptions are three wells installed by Argonne in 1994 to depths of 68, 84, and 83 ft BGL (below ground level; SB01, SB02, and SB04, respectively) (Figure 1.5). Monitoring wells SB04 and SB04A were plugged in 1997 at the request of the property owner. Private well depths are approximately 40-100 ft BGL. Depth to groundwater is generally about 30-45 ft BGL. Historical static water level data indicate that groundwater flow is toward the northwest to west.

1.2.2 Previous Investigations

Environmental investigations at Ramona began in November 1988 in response to a citizen's complaint to the KDHE about petroleum odors in a private drinking water well. At that time, the KDHE sampled one drinking water well (owned by A. Gonzalez). The carbon tetrachloride concentration in the groundwater sample from this well was 16.4 µg/L (KDHE 1993). The maximum contaminant level (MCL) for carbon tetrachloride is 5.0 µg/L, as is the Kansas Tier 2 risk-based screening level (RBSL) (KDHE 2003). Analysis of the sample also indicated the presence of 1,2-dichloroethane (1,2-DCA) at 1.2 µg/L.

The results of this initial sampling event prompted several investigations to determine the extent and source of the contaminants detected. To date, more than 300 groundwater samples have been collected from nearly 100 wells at Ramona. Nitrates and numerous volatile organic compounds (VOCs) have been detected in many wells. The most persistent compounds are those related to petroleum products, as well as carbon tetrachloride and nitrates.

Shown in Figure 1.5 are the locations of previously sampled wells. Table 1.1 summarizes the history of work conducted at Ramona. A detailed discussion of the historical investigations was included in the *Work Plan* (Argonne 2005). The *Work Plan* also included construction details and water levels for existing private and monitoring wells (Table A.1 of Appendix A in Argonne [2005]) and complete historical analytical data for groundwater samples (Table A.2 of Appendix A in Argonne [2005]).

TABLE 1.1 History of work conducted at Ramona, Kansas.

Date	Description of Work	Reference
November 1988	KDHE sampling of 1 private well (A. Gonzales, owner). In addition to carbon tetrachloride (16.4 µg/L), 1,2-DCA was detected (1.2 µg/L).	KDHE 1993
December 1988 to January 1989	KDHE sampling of 25 private wells. Carbon tetrachloride was detected in 17 wells. Levels in 7 wells were above the MCL. The highest concentration detected was 45.5 µg/L in the Co-op well.	KDHE 1993
June 1992	EPA removal assessment, Phase 1, with sampling of 59 private wells. VOCs were detected in 43 wells. Carbon tetrachloride levels in 5 wells exceeded the MCL. The highest concentration was 188 µg/L in the Co-op well.	KDHE 1993
September 1992	EPA removal assessment, Phase 2, with 32 soil samples collected (including 3 replicate samples). Only trace levels of carbon tetrachloride were detected near the CCC/USDA facility. Significantly higher levels were detected near the Co-op. The occurrence of uncontaminated samples between these properties suggested independent carbon tetrachloride sources.	KDHE 1993
October 1992	EPA removal assessment, Phase 3, with groundwater sampling and residential air sampling at 3 residences. Carbon tetrachloride was detected at a level below permissible exposure limit (PEL) in 2 homes; benzene was detected at a level above the PEL in 1 home. The KDHE Tank Section conducted soil gas sampling to investigate the benzene contamination.	KDHE 1993
January 1993	Removal action. EPA and KDHE supplied carbon filter units to 7 homes and bottled water to City Hall. The CCC/USDA assumed responsibility for maintenance of the filters and bottled water.	KDHE 1993
March 1993	KDHE preliminary assessment, naming the Co-op and the former CCC/USDA facility as likely sources of carbon tetrachloride contamination. Other sources identified include the former location of an underground storage tank system (for benzene) and general farming and feedlot practices (for nitrates).	KDHE 1993
June–August 1994	Argonne Expedited Site Characterization conducted for the CCC/USDA, with installation of 6 monitoring wells (SB01–SB05 and SB04A). Additional work was suspended because of denial of access to railroad property.	Argonne 2001
September 1995	Removal action. An emergency grant from the USDA Farmers Home Administration to the City of Ramona funded connection of most residences to the Marion County RWD #1 supply.	E&E 1996
April 1996	EPA preliminary assessment of previous data. No new data were generated.	E&E 1996
December 1996 to August 1998	KDHE CAS, Phase 1, with 21 private wells sampled. KDHE CAS, Phase 2, with soil and soil gas sampling and with groundwater samples collected from CCC/USDA wells and 5 private wells. KDHE CAS, Phase 3, with 2 additional monitoring wells installed. KDHE CAS, Phase 4, with sampling of new and existing monitoring wells.	Tetra Tech 1999a

TABLE 1.1 (Cont.)

Date	Description of Work	Reference
June 1999	KDHE sampling of 6 monitoring wells and 11 private wells being used for drinking water supply. No carbon tetrachloride was detected in any private well. Two monitoring wells contained carbon tetrachloride (MW01 at 8.2 µg/L and SB03 at 7.5 µg/L). Groundwater flow was determined to be to the southeast; however, measurements were collected from ground surface, rather than the tops of casings. Wells completed in both the upper and lower aquifers were used to determine flow direction.	Tetra Tech 1999b
April 2000	Initial event of KDHE long-term monitoring, with sampling of all monitoring wells. Two wells contained carbon tetrachloride (MW01 at 0.8 µg/L and SB03 at 48.5 µg/L). Groundwater flow was found to be to the northwest.	KDHE 2000
April 2001	KDHE long-term monitoring. CCC/USDA wells were sampled, but KDHE wells were dry. Only SB03 showed carbon tetrachloride (16.4 µg/L).	KDHE 2001
February 2002	KDHE long-term monitoring for nitrates only. Only SB05 had enough water to sample.	KDHE 2002
May 2002	KDHE Tank Section sampling of the Jim Brunner private well and 13 wells installed in 2001–2002 as part of the federal Leaking Underground Storage Tank (LUST) program, with analysis for BTEX (benzene, toluene, ethylbenzene, and xylene) compounds and other petroleum-related compounds.	Maxim, Inc., 2003
August 2002	KDHE Tank Section sampling of 13 monitoring wells for BTEX and other petroleum-related compounds.	Maxim, Inc., 2003
February 2003	KDHE Tank Section sampling of 12 monitoring wells for BTEX and other petroleum-related compounds.	Maxim, Inc., 2003
March 2003	KDHE long-term-monitoring sampling event. All wells were dry.	Geotechnical Services, Inc., 2004
June 2003	KDHE Tank Section sampling of 12 wells installed in 2001–2002 as part of the LUST program. Three wells contained carbon tetrachloride (1.5 µg/L, 4.9 µg/L, 9.2 µg/L).	Maxim, Inc., 2003
February 2004	KDHE long-term monitoring, with sampling of CCC/USDA and KDHE wells. KDHE wells were dry. Only SB03 contained carbon tetrachloride (22 µg/L).	Geotechnical Services, Inc., 2004
May 2004	KDHE Tank Section sampling of Brunner private well and 11 monitoring wells. Three monitoring wells contained carbon tetrachloride at 6.5 µg/L, 5.6 µg/L, and 1.1 µg/L. The Brunner well contained carbon tetrachloride at 0.56 µg/L.	KDHE 2004
October 2005	KDHE survey to determine the status of private wells. The results indicated that 5 of the 19 properties still used water for domestic purposes.	KDHE 2005b

TABLE 1.1 (Cont.)

Date	Description of Work	Reference
January 2006	KDHE investigation at the Tampa Co-op. Soil and groundwater samples were collected with Geoprobe direct-push technology and from existing wells. Sampling occurred in three areas: on the Tampa Co-op property (now owned by Agri Producers), east of the railroad track, and on the former CCC/USDA property. Analytical data indicated high concentrations of carbon tetrachloride on the Co-op (Agri Producers) property but only low to trace concentrations on the former CCC/USDA property. Samples collected between the Co-op (Agri Producers) property and the former CCC/USDA property showed no detectable levels of carbon tetrachloride. These results indicate a definitive separation of source areas.	KDHE 2006
November 2006	KDHE long-term monitoring, with sampling of two monitoring wells downgradient (northwest) and one private well upgradient of the potential contaminant source areas. Carbon tetrachloride was not detected in the groundwater samples. Nitrate was detected at concentrations below the MCL (10 mg/L) in the private well and the monitoring well farthest downgradient. The nitrate concentration in the monitoring well near the former Co-op (Agri Producers) fertilizer building exceeded the MCL by more than a factor of two.	KDHE 2007
January–April 2007	Consent Order executed by Agri Producers and KDHE, requiring Agri Producers to complete a Comprehensive Investigation/Corrective Action Study and a Corrective Action Plan/Corrective Action. KDHE received an investigation work plan from Agri Producers on March 23, 2007. KDHE responded to the work plan on April 18, 2007, and requested substantial revisions. No responses to KDHE's requests have been submitted by Agri Producers.	KDHE 2007

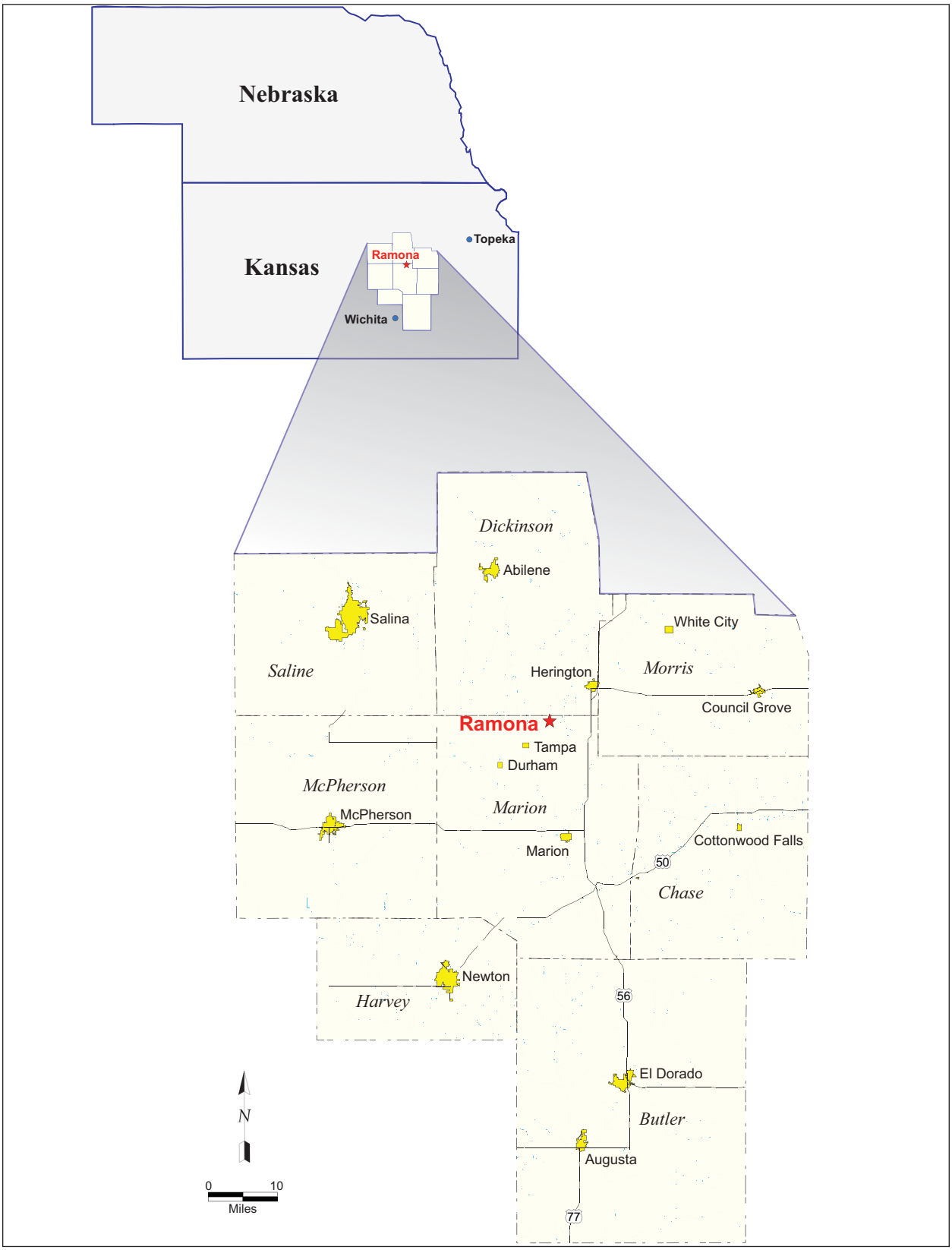


FIGURE 1.1 Location of Ramona, Kansas.

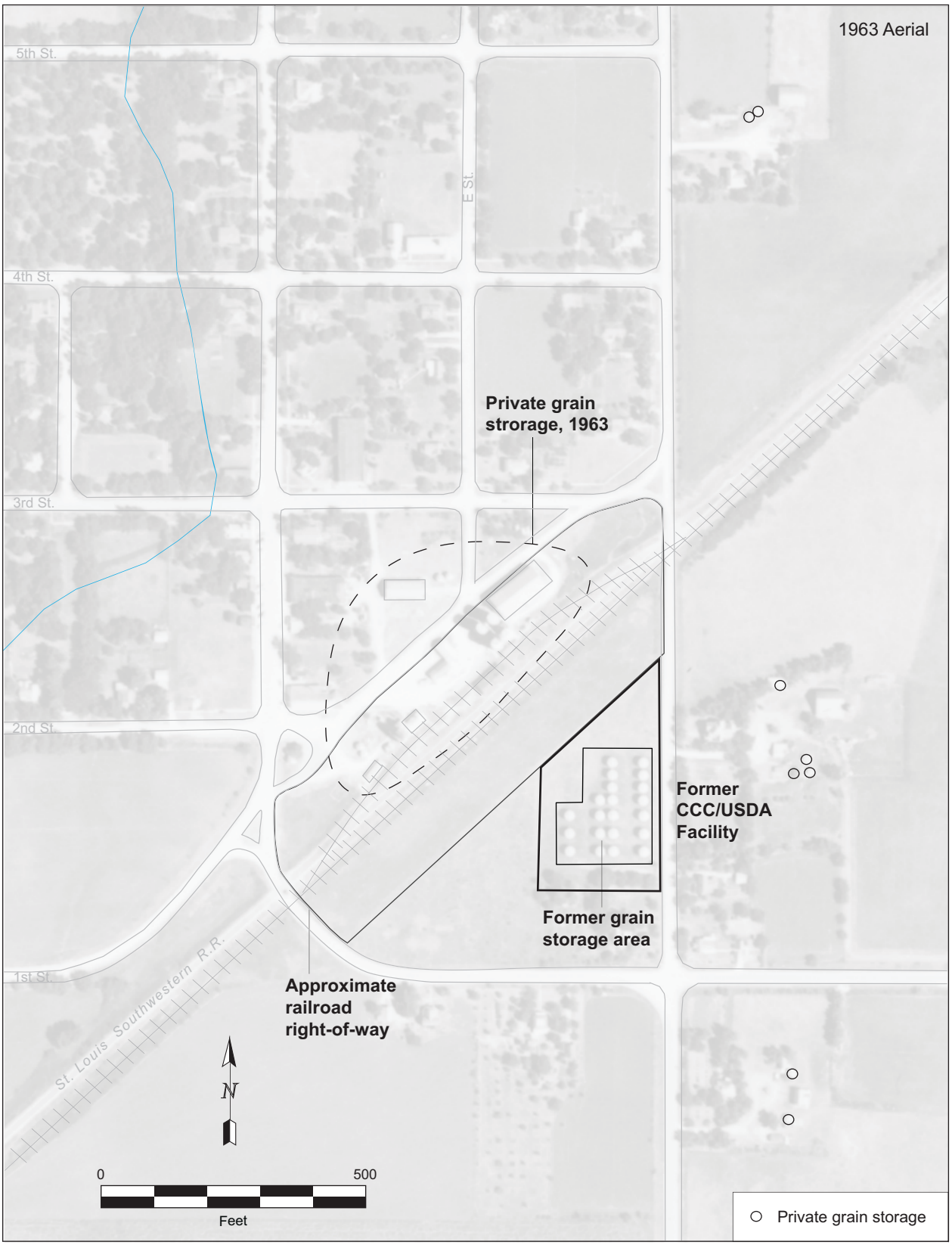


FIGURE 1.2 Locations of former grain storage facilities at Ramona. Source of photograph: USGS (1963).

FIGURE 1.3 Former CCC/USDA property in 1963, with 21 grain bins. Source of photograph: USGS (1963).

FIGURE 1.4 Former CCC/USDA property in 2002. Source of photograph: USGS (2002).

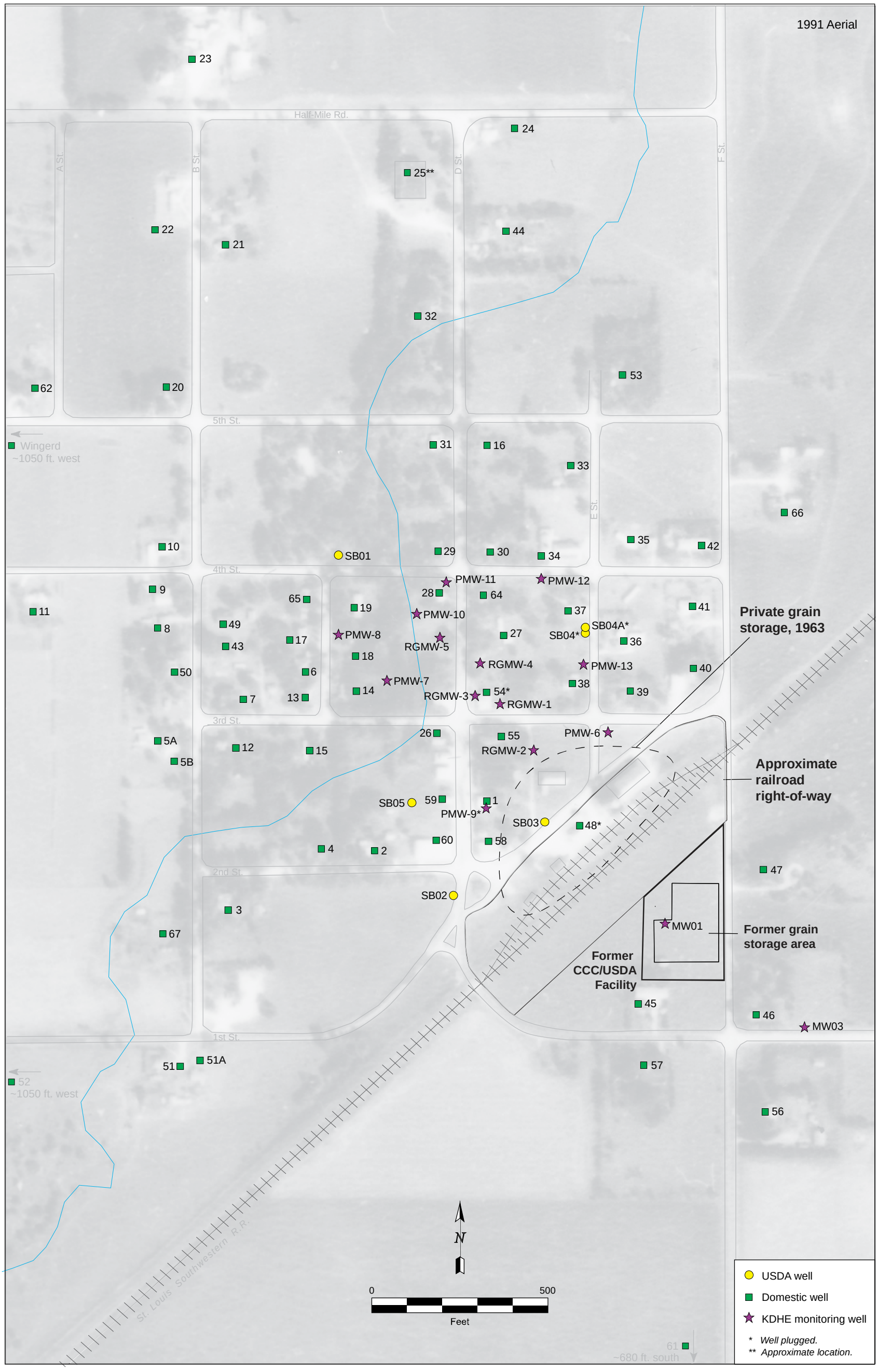


FIGURE 1.5 Locations of previously sampled wells. Source of photograph: USGS (1991).

2 Investigative Methods

The 2006 CCC/USDA investigation at Ramona was performed by using an iterative process of data collection, evaluation, and interpretation during field activities. This methodology ensured that the effort generated the data necessary to achieve the specific investigation goals identified in Section 1. Throughout data evaluation and interpretation, the CCC/USDA and KDHE project managers were kept informed of the analytical results as they were received, and modifications to the *Work Plan* (Argonne 2005) were made with their input and approval.

Throughout the field program, a comprehensive quality assurance/quality control (QA/QC) program was implemented to confirm the reliability of all information as it was accumulated. Procedures for the individual techniques employed by Argonne at this site are in the *Master Work Plan* (Argonne 2002). This section provides a brief overview of the methods used to implement this investigation, and it identifies modifications made to the site-specific *Work Plan* (Argonne 2005) in response to data acquired during the field work.

The primary data collected during the 2006 CCC/USDA investigation at the Ramona site included electronic logs and soil and groundwater samples. Electronic logs were used to evaluate the site lithology and determine target depths for groundwater samples. These data were collected by using the electronic capabilities of Argonne's cone penetrometer (CPT). Contaminant source areas were investigated by collecting soil and groundwater samples with the CPT at selected locations. All locations investigated are shown in Figure 2.1. The activities at each location are summarized in Table 2.1.

The initial task conducted at selected CPT locations was collection of an electronic profile from ground surface to bedrock, in accordance with the procedures detailed in the *Master Work Plan* (Argonne 2002). The electronic logs are in Appendix B.

At three CPT locations, soil samples were collected at 4-ft intervals from the ground surface to bedrock (or to the top of the saturated zone at selected locations). Because of the slow recharge rate at many locations, the depth to the saturated zone was estimated on the basis of groundwater levels in nearby wells and data from electronic logs. In three boreholes (SB06, SB07, and SB10), soil samples were collected by using a 4-ft-long modified Macro-Core® soil

sampler that allowed for discrete and continuous sample collection at specified depths. Lithologic descriptions of soil cores are in Appendix B.

Groundwater samples were collected from CPT boreholes and from permanent small piezometers installed during this investigation. Samples from CPT boreholes were collected at 5-ft intervals from the static water level to bedrock. Targeted sampling depths were determined from the electronic logs and water level data for existing monitoring wells. After target sample intervals were identified, the CPT rods were pushed to the specified depth. The lead CPT rod was fitted with a 5-ft polyvinyl chloride (PVC) screen inserted inside the rod and attached to a disposable tip. After the target depth was reached, PVC riser pipe was inserted into the rods and threaded to the screen. The rods were then withdrawn 5 ft to expose the screened area. If groundwater was not initially present, the CPT rods were withdrawn completely, and the temporary well was left in place until enough groundwater accumulated for sampling. Temporary wells were set at each location to the extent necessary to accomplish the investigational goals. All temporary wells were subsequently plugged in accordance with KDHE regulations.

The permanent piezometers were installed by using direct-push technology. Each well was installed by using the CPT to advance a 4.25-in.-diameter borehole to a depth of 20 ft BGL. From 20 ft BGL to total depth, a 3.25-in.-diameter borehole was advanced. Each well was cased with 1-in.-diameter, Schedule 40 PVC with 10 ft of 0.01-in. slotted screen at the bottom of the hole. Appropriate quantities of sand and grout were placed in the borehole annulus.

Soil and groundwater samples were collected in laboratory-approved containers, sealed, placed on ice (dry ice for soils), and transported to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne National Laboratory for preparation and analysis for VOCs, including carbon tetrachloride, chloroform, and 1,2-DCA.

2.1 Methods to Determine the Subsurface Contaminant Conditions on the Former CCC/USDA Facility

To document the contaminant conditions on the former CCC/USDA property, soil samples were collected from 3 CPT locations, and groundwater samples were collected from 12 CPT locations and 5 newly installed piezometers (Figure 2.1). The *Work Plan* (Argonne 2005) also proposed sampling existing monitoring wells in the general investigation area. These wells

were not sampled, because the analytical data from the CPT locations indicated no off-site migration of carbon tetrachloride contamination at concentrations above the MCL and RBSL value of 5.0 µg/L. This change in the *Work Plan* was approved by the CCC/USDA and KDHE project managers.

Before groundwater samples were collected, each piezometer was purged in accordance with procedures in the *Master Work Plan* (Argonne 2002). Samples were collected in laboratory-approved containers, and the containers were sealed, placed on ice, and transported to the AGEM Laboratory for preparation and analysis for VOCs, including carbon tetrachloride, chloroform, and 1,2-DCA.

The subsurface contaminant conditions were determined through interpretation of the soil and groundwater data collected during this investigation.

2.2 Methods to Determine the Horizontal and Vertical Extent of Contamination Associated with Any Potential Source Areas on the Former CCC/USDA Facility

The originally proposed scope of work to delineate the extent of contamination associated with potential source areas on the former CCC/USDA property included collection of soil and groundwater samples from select locations on the property and groundwater samples at locations adjacent to the property. The data collected from locations on the former CCC/USDA property indicated no off-site migration of carbon tetrachloride or chloroform at concentrations above the MCL or RBSL; therefore, the proposed off-site locations were not investigated. In addition, soil sampling was limited to a subset of the boreholes, because no contamination was detected in the initial boreholes. These changes in the scope of work were approved by the CCC/USDA and KDHE project managers.

The horizontal and vertical extent of contamination was determined by collecting data from CPT boreholes (TI06-TI17) and piezometers (MW05-MW08) on the former CCC/USDA property, as well as from one CPT borehole (TI16) and one piezometer location (MW04) upgradient of the former facility. The locations investigated with the CPT and the permanent piezometers are shown in Figures 2.1 and 2.2.

2.3 Methods to Establish the Current Contaminant Levels in Groundwater Samples from Existing and Newly Installed Monitoring Wells

Field activities to determine current contaminant concentrations in groundwater involved the collection of groundwater samples from five newly installed piezometers (MW04, MW05, MW06, MW07, and MW08). Current contaminant conditions on the former CCC/USDA property were adequately delineated with the resulting data.

No existing wells were sampled, because no contamination above the MCL or RBSL was observed at downgradient sample locations on the former CCC/USDA property. This modification to the *Work Plan* was approved by the CCC/USDA and KDHE project managers.

2.4 Methods to Verify the Groundwater Flow Direction through Initiation of Long-Term Monitoring

During the 2006 investigation, groundwater levels in piezometers were recorded manually on July 20 and November 3, 2006. Levels were measured with an electronic meter to the nearest 0.01 ft from a surveyed reference point (the top of the casing). Static water levels measured on these dates, as well as on May 17, 2007, are in Table S1.1, Supplement 1. Supplement 1 and the other supplements are on a compact disc (CD) inside the back cover of this report.

On July 20, 2006, Argonne placed data loggers in piezometers MW04, MW05, MW06, MW07, and MW08 (installed in 2006) and in wells SB02 and SB03 (installed in 1994 at locations shown in Figure 1.5). The data loggers have been recording water levels at 4-hr intervals. The complete set of water levels recorded by the data loggers from July 2006 to May 2007 is in Supplement 1, Table S1.2. Precipitation data for this period are in Supplement 1, Table S1.3.

Maps depicting groundwater gradients developed from the data logger records are discussed in Section 4.1.

2.5 Methods to Investigate Subsurface Contaminant Conditions on Adjacent Properties

The objective to investigate subsurface contaminant conditions on adjacent properties was not pursued, because soil and groundwater data collected at downgradient sampling points during the 2006 investigation indicated no off-site migration of carbon tetrachloride or chloroform at concentrations above the MCL or RBSL. This modification to the *Work Plan* was approved by the CCC/USDA and KDHE project managers.

TABLE 2.1 Field activities during the investigation at Ramona.

Location	Number of Water Samples	Water Sampling Interval (ft BGL)	Dry Interval[a] (ft BGL)	Number of Soil Samples	Soil Sampling Interval (ft BGL)	Number of Grain Size Samples	Grain Size Sampling Interval	Lithology Log	CPT Sensor Log	Well Installed[b]	Water Levels
Cone penetrometer locations											
TI06	4	48-75	42-47	18	3-68.5	–	–	x	x		
TI07	6	44-85.5	37-42	20	2-77	4	37.1-63.4	x	x		
TI08	4	41-70	–	–	–	–	–		x		
TI09	4	46-70	40-45	–	–	–	–		x		
TI10	5	46-78.66	40-45	19	2-53	–	–	x	x	MW07	
TI11	4	40-70	46-51	–	–	–	–		x		
TI12	4	45-70	–	–	–	–	–		x	MW06	
TI13	5	40-68.75	–	–	–	–	–				
TI14	4	55-87	–	–	–	–	–				
TI15	6	51-81.4	45-50	–	–	–	–				
TI16	4	58-81.5	46-56	–	–	–	–			MW04	
TI17	2	48.8-62	–	–	–	–	–		x	MW05	
Cone penetrometer piezometers											
MW04	1	45-55	–	–	–	–	–			Yes	x
MW05	1	45-55	–	–	–	–	–			Yes	x
MW06	1	45-55	–	–	–	–	–			Yes	x
MW07	1	45-55	–	–	–	–	–			Yes	x
MW08	1	45-55	–	–	–	–	–			Yes	x
Previously existing locations											
SB02											x
SB03											x

[a] Groundwater sampling was attempted, but the interval was dry.

[b] The indicated monitoring well was installed at the vertical-profile CPT sampling location. Well MW08 was installed between CPT locations TI08 and TI13.

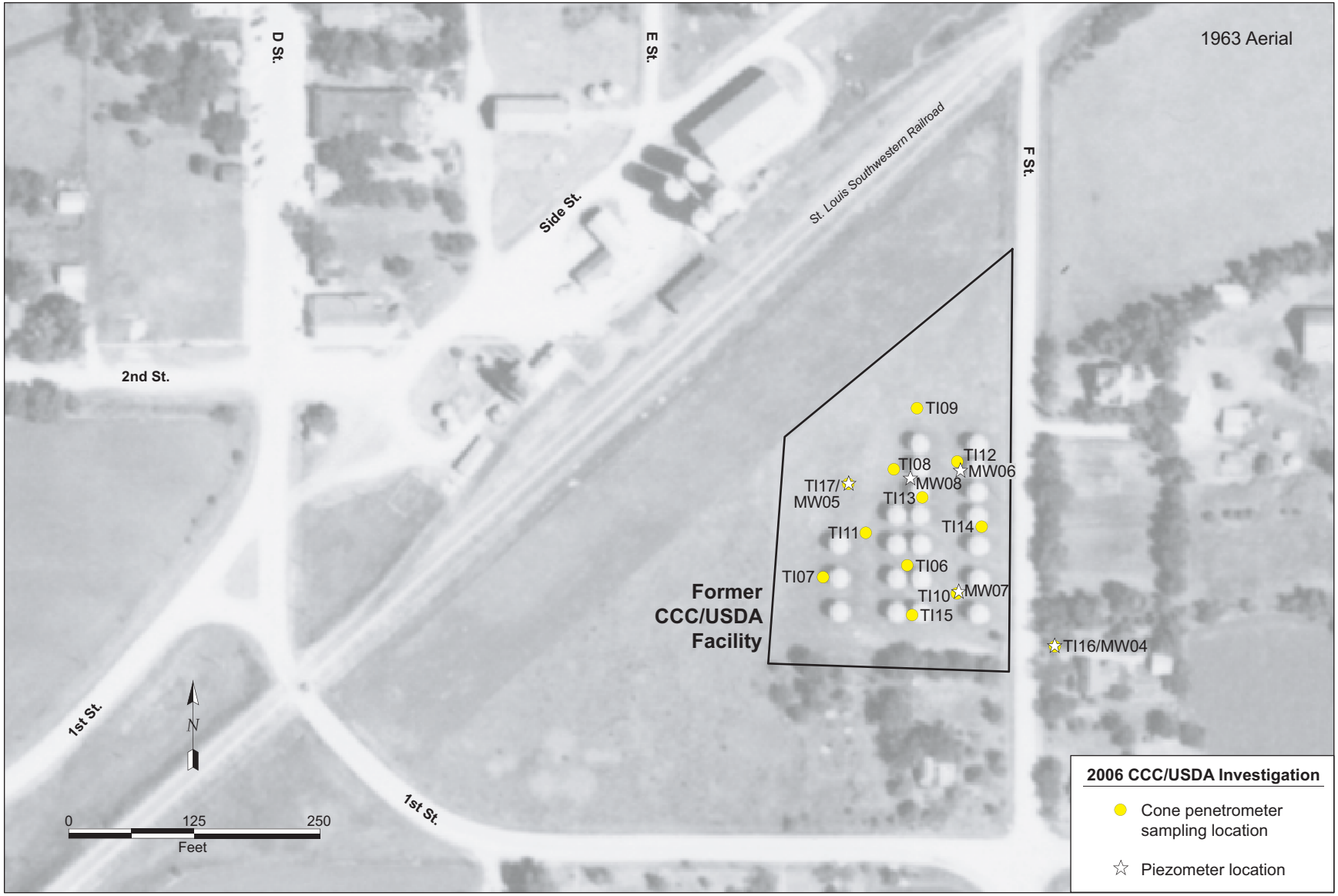


FIGURE 2.1 Locations investigated by the CCC/USDA in 2006. Source of photograph: USGS (1963).

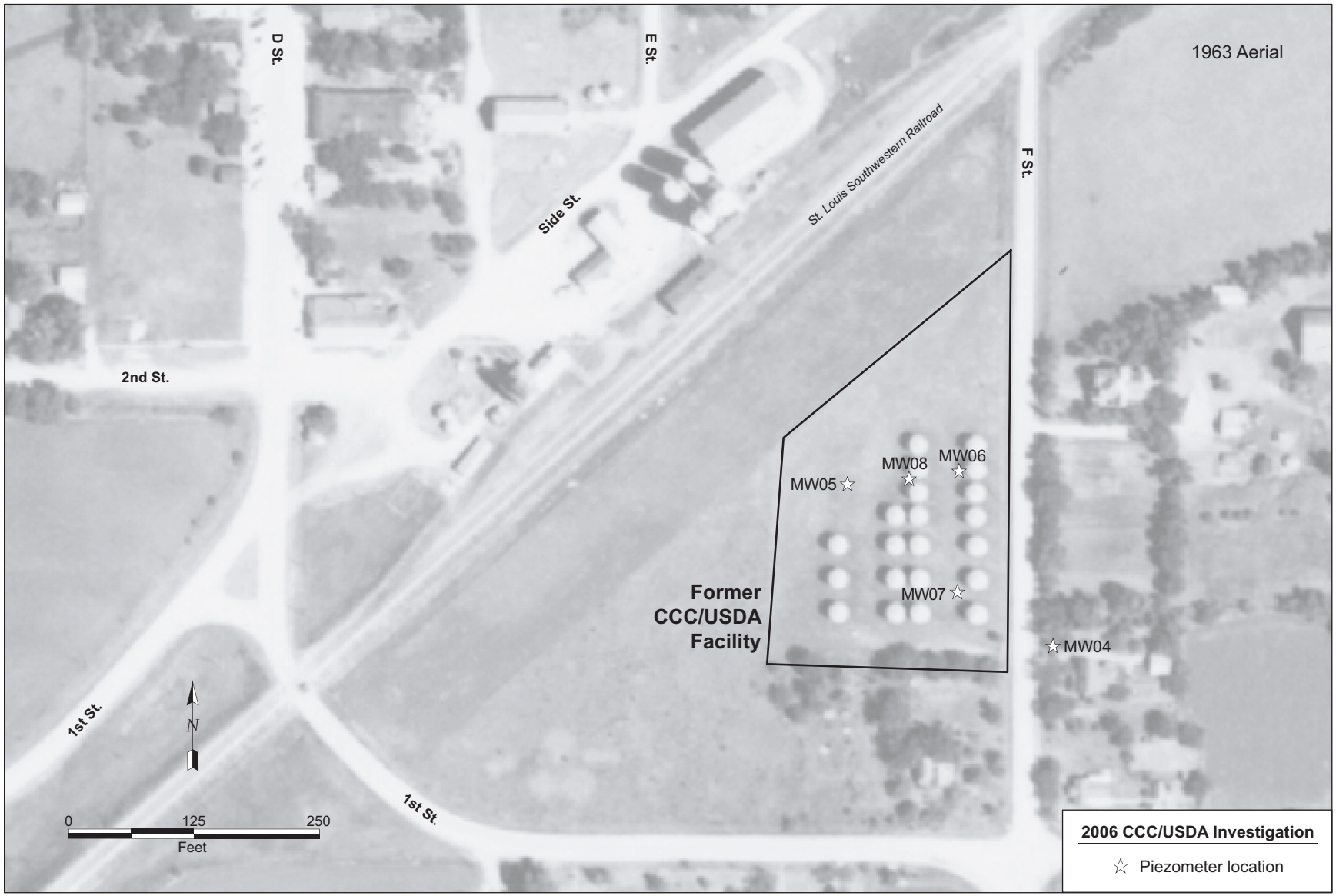


FIGURE 2.2 Locations of permanent piezometers installed by the CCC/USDA in 2006. Source of photograph: USGS (1963).

3 Field and Laboratory Data

This section presents the field and laboratory data generated during the Ramona investigation. The methods and procedures followed in collecting the data are described in detail in the *Master Work Plan* (Argonne 2002) and in Section 2 of the present document. A detailed interpretation of the data is in Section 4.

3.1 Cone Penetrometer Sensor Data

The CPT was used to collect tip and sleeve electronic sensor data in eight boreholes (TI06, TI07, TI08, TI09, TI10, TI11, TI12, and TI17) (Figure 2.1). The electronic logs are in Appendix B. All investigated locations were on the former CCC/USDA property.

Measurements of tip and sleeve stresses were used to identify target zones for groundwater sampling and to estimate depth to bedrock. Tip stress is a measure of the resistance of soil on the tip of the cone during penetration, and sleeve stress is a measure of the drag created along the sidewall of the cone. The ratio of tip stress to sleeve stress, called the friction ratio, is one tool for evaluating subsurface lithology.

The electronic sensor data collected during the Ramona investigation did not indicate significant or distinct zones of sand or gravel. This observation was supported by the soil cores collected from select boreholes. Electronic data were collected from the ground surface to refusal, which occurred at approximately 61-78.66 ft below ground level (BGL).

3.2 Piezometer Construction

The CPT was used to install permanent piezometers MW04, MW05, MW06, MW07, and MW08 (Figure 2.2). The construction diagrams and Kansas water well completion registrations (WWC-5 records) for these wells are in Appendix C. Wells were constructed in accordance with KDHE regulations.

3.3 Coordinates Survey Data

The subsurface soil and groundwater sampling locations were surveyed by Schwab-Eaton, P.A., Manhattan, Kansas, to provide horizontal and vertical control for stratigraphy correlation and water level monitoring. Coordinates survey data are in Appendix D, Table D.1. A metal pin driven into the ground at each soil boring location was surveyed, and each piezometer was surveyed from the top of the casing.

3.4 Analytical Data for Subsurface Soil Samples

Discrete subsurface soil samples were collected at three CPT locations (TI06, TI07, and TI10; Figure 2.1) on the former CCC/USDA property, at approximately 4-ft intervals in each borehole. The shallowest sample collected was at a depth of 2 ft BGL (TI07), and the deepest was at 77 ft BGL (also in TI07). The primary purpose was to investigate potential source areas and migration pathways for carbon tetrachloride. Soil boring locations were chosen, in consultation with the KDHE, on the basis of analytical data from past investigations, as well as a review of areas where grain handling or chemical storage is thought to have occurred on the former CCC/USDA property.

On the former CCC/USDA property, 57 soil samples were collected in vertical profiles at boreholes TI06, TI07, and TI10. The samples were prepared and analyzed for VOCs by using U.S. Environmental Protection Agency (EPA) Methods 5030B and 8260B. Complete analytical results for VOCs in soil samples are in Table 3.1.

Detectable concentrations of carbon tetrachloride and chloroform in soils were found only in borehole TI10 (Table 3.1). Carbon tetrachloride was detected at or above the AGEM Laboratory method quantitation limit of 10 µg/kg in three soil samples. Trace levels (below the quantitation limit) were also detected in three samples. Chloroform was detected in four soil samples collected at TI10, at trace concentrations below the AGEM method quantitation limit. Neither methylene chloride nor 1,2-DCA was found in any soil sample collected on the former CCC/USDA property. The carbon tetrachloride and chloroform distributions in soil are illustrated in Figure 3.1 and Figure 3.2, respectively.

3.5 Groundwater Analytical Data

A total of 57 groundwater samples were collected. Of these, 52 were from 12 CPT boreholes (TI06-TI17), and 5 were from newly installed piezometers (MW04-MW08). Groundwater samples were collected from the CPT boreholes in vertical profiles, at discrete depths between 40 ft BGL and 87 ft BGL. The results of field measurements made during sampling are in Table S2.1 in Supplement 2 (on CD).

The primary reasons for collecting groundwater samples from the newly installed piezometers were to determine the extent of contamination in groundwater at the former CCC/USDA property and to establish groundwater monitoring points. Groundwater samples were collected at CPT locations to investigate potential source areas and migration pathways for the carbon tetrachloride contamination.

Locations for groundwater sampling with the CPT were selected, in consultation with the KDHE, on the basis of analytical data from past investigations and a review of areas where grain handling was thought to have occurred on the former CCC/USDA property. Analytical data from the CPT boreholes were used to determine piezometer placement. Piezometer MW04 was installed southeast of the former CCC/USDA property (Figure 2.2) to identify potential off-site sources of contamination that could potentially migrate onto the site. Piezometer MW07 was positioned adjacent to the CPT borehole (TI10) that showed the highest carbon tetrachloride concentration, and piezometers MW05, MW06, and MW08 were positioned at downgradient locations. Piezometer MW05 was placed adjacent to the former location of MW01. Well MW01was plugged during the 2006 investigation, because it historically had been dry. The well plugging record (WWC-5P record) submitted to KDHE is in Appendix C.

On the former CCC/USDA property, 48 groundwater samples were collected from 11 CPT boreholes (TI06-TI15 and TI17), at depths from 40 ft to 87 ft BGL (Table 3.2). At one off-site CPT borehole location (TI16), upgradient from the former CCC/USDA property, 4 groundwater samples were collected. Five additional groundwater samples were collected from newly installed piezometers MW04-MW08. All groundwater samples were analyzed for VOCs by using EPA Method 524.2.

Complete results for VOCs in groundwater samples are in Table 3.2. Figure 3.3 shows the groundwater sampling locations and the maximum carbon tetrachloride concentration

detected in groundwater at each location. Figure 3.4 is an analogous map showing maximum chloroform concentrations in groundwater.

Carbon tetrachloride was detected at or above the AGEM Laboratory method quantitation limit of 1.0 µg/L in 15 groundwater samples from CPT locations TI06, TI09, TI10, TI12, TI13, TI14, and TI17, as well as from wells MW06 and MW07 (Table 3.2 and Figure 3.3). In addition, trace levels of carbon tetrachloride (below the method quantitation limit) were detected in 20 groundwater samples from CPT locations TI06, TI07, TI09, TI10, TI11, TI12, TI13, TI14, TI15, and TI17 and from wells MW05 and MW08. Concentrations in only two groundwater samples exceeded the MCL and RBSL value of 5.0 µg/L for carbon tetrachloride. These samples were collected from TI10 at 46-51 ft BGL (23 µg/L) and from MW07 at 45-55 ft BGL (6.3 µg/L).

Chloroform was detected at or above the method quantitation limit in 8 groundwater samples from CPT locations TI07, TI10, and TI12 and from wells MW06 and MW07. Chloroform was detected at trace levels in 18 samples from CPT locations TI06, TI08, TI09, TI10, TI11, TI12, TI13, TI14, and TI17 and from well MW05. All of the chloroform concentrations were below the MCL and RBSL value of 80 µg/L for this compound.

No VOCs were detected in groundwater samples collected at upgradient locations TI16 and MW04. Neither methylene chloride nor 1,2-DCA was found in any groundwater sample collected during this investigation.

3.6 Groundwater Flow Direction and Depth Data

The groundwater gradient in the general investigation area has historically been toward the northwest to west. During the 2006 investigation, groundwater levels in piezometers were recorded manually with an electronic meter on July 20 and November 3, 2006. Static water levels measured on these dates, as well as on May 17, 2007, are in Table S1.1, Supplement 1 (on CD).

On July 20, 2006, Argonne placed data loggers in new piezometers MW04-MW08 and in previously existing wells SB02 and SB03. The data loggers have been recording water levels at

4-hr intervals. The complete set of water levels recorded by the data loggers from July 2006 to May 2007 is in Supplement 1, Table S1.2.

Maps depicting groundwater gradients developed from the data logger records are included in Section 4.1.

3.7 Results of Quality Control Activities

The QA/QC procedures for sample collection, handling, and analysis during the investigation are described in detail in the *Master Work Plan* (Argonne 2002) and the site-specific *Work Plan* for the Ramona investigation (Argonne 2005). A detailed QA/QC report addressing activities related to sample collection, handling, and analysis is in Supplement 3 (on CD).

Results of QA/QC activities are summarized as follows:

- Sample integrity was maintained successfully throughout the collection, shipping, and analysis activities through documentation of samples as they were collected and the use of custody seals and chain-of-custody records. Chain-of-custody documents are in Supplement 4 (on CD).

- All samples were received with custody seals intact and at the appropriate preservation conditions. All samples were analyzed within the required holding times. Carbon tetrachloride and chloroform were not detected in laboratory method blanks.

- Methylene chloride was present at trace concentrations in the methanol used for extraction of the soil samples. Detections of methylene chloride at similar concentrations in the soil samples are not reported.

- As an indicator of cross-contamination, 16 trip blanks were prepared and included in containers of soil or water samples shipped for organic analyses. Carbon tetrachloride was not detected in trip blanks shipped with samples for

VOCs analyses; however, trace levels of chloroform were detected in 3 trip blanks shipped with water samples.

- One field blank was collected to represent water used during equipment decontamination. Carbon tetrachloride was not detected in the field blank; however, a trace concentration of chloroform was detected.

- Eight equipment rinsates were collected to monitor decontamination procedures for the reusable sampling equipment. Carbon tetrachloride was not detected in the rinsate samples, indicating that cross-contamination of groundwater samples did not occur during sample collection. The trace concentrations of chloroform detected in 3 rinsate samples are consistent with the concentration of chloroform present in the water used for decontamination.

- Soil and groundwater samples were analyzed for carbon tetrachloride and chloroform at the AGEM Laboratory by using the purge-and-trap method. Dual analyses of samples indicated consistency in the sampling and analytical methodologies. Dual analyses involved either analyses of replicate samples submitted to the laboratory or duplicate analyses of samples selected by the laboratory. Consistency in both the sampling and analytical methodologies is indicated. The data from the AGEM Laboratory are acceptable for quantitative determination of contaminant distribution.

- The analyses of water samples at the AGEM Laboratory with EPA Method 524.2 were verified at a second laboratory with EPA-defined Contract Laboratory Program (CLP) methodology. Of the 66 groundwater samples and replicates analyzed at the AGEM Laboratory, 9 (13.6%) were also analyzed with CLP methodology by Envirosystems, Inc., in Columbia, Maryland. Agreement was good over the range of contaminant concentrations detected. Samples analyzed at the AGEM Laboratory with no detection of contamination were analyzed at the CLP laboratory with similar results. Outside laboratory data are in Supplement 4 (on CD).

- The analyses of soil samples at the AGEM Laboratory with EPA Method 8260B were verified by a second laboratory (Severn-Trent Laboratories, Inc., Colchester, Vermont) with the same analytical method. Of the 57 soil samples analyzed at the AGEM Laboratory, 6 (10.5%) were also analyzed by Severn-Trent. Agreement was good over the range of contaminant concentrations detected. Soil samples analyzed at the AGEM Laboratory with no detection of VOCs were analyzed by Severn-Trent with similar results. Outside laboratory data are in Supplement 4 (on CD).

3.8 Waste Characterization, Handling, and Disposal

The piezometers produced only a small volume of water (1.68 gal total for all wells). The highest carbon tetrachloride concentration detected was 6.3 µg/L, in a sample from MW07. A total of 0.24 gal was purged from this well. A decision was made in the field to discharge this small quantity of wastewater on-site. This was contrary to procedures in the *Master Work Plan* (Argonne 2002). To ensure this does not occur in the future, a meeting was held with all field staff. The proper procedures for handling and disposing of wastewater were discussed. The discussion emphasized that all quantities of wastewater must be contained and properly tested before a disposal method can be determined. The oversight was brought to the attention of the KDHE project manager, who noted the issue, the limited volume of water released, and the low level of contamination in that water. The KDHE project manager acknowledged Argonne's assurance that this incident will not be repeated.

3.9 Summary of Analytical Data

The data collected during this investigation address the objectives detailed in the KDHE-approved *Work Plan* (Argonne 2005). Key results indicated by the analytical data are as follows:

- Carbon tetrachloride was detected above the AGEM Laboratory method quantitation limit of 1.0 µg/L in 15 of the 57 groundwater samples collected.

- Trace concentrations (below the AGEM Laboratory method quantitation limit) of carbon tetrachloride were detected in 20 groundwater samples, and 22 samples showed no detectable concentrations.

- Carbon tetrachloride was detected at or above the MCL and RBSL value of 5.0 µg/L in two groundwater samples (23 µg/L at 46-51 ft BGL, boring TI10, and 6.3 µg/L at 45-55 ft BGL, piezometer MW07). Both locations are near the southeast corner of the former CCC/USDA property. Piezometer MW07 was completed adjacent to the TI10 location.

- Carbon tetrachloride was detected at or above the AGEM Laboratory method quantitation limit of 10 µg/kg in 3 of the 57 soil samples collected (at 1 of the 3 locations sampled) on the former CCC/USDA property. The highest carbon tetrachloride level in soil occurred at TI10 (14 µg/kg at 39.5 ft BGL), in the southeast part of the property. None of the concentrations exceeded the RBSL of 200 µg/kg for the soil-to-groundwater protection pathway.

- Chloroform was detected at or above the AGEM Laboratory method quantitation limit of 1.0 µg/L in 8 of the 57 groundwater samples collected. The highest concentration detected was 4.6 µg/L at 50-55 ft BGL, at borehole TI12. None of the concentrations exceed the MCL and RBSL value of 80 µg/L.

- Trace concentrations (below the AGEM Laboratory method quantitation limit) of chloroform were detected in 18 groundwater samples, and 31 samples showed no detectable concentrations.

- Chloroform was detected in 4 soil samples at concentrations below the AGEM Laboratory method quantitation limit of 10 µg/kg. All other soil samples showed no detectable concentration of chloroform.

- Neither 1,2-dichloroethane nor methylene chloride was detected in soil or groundwater samples collected on or adjacent to the former CCC/USDA property.

TABLE 3.1 Analytical results for volatile organic compounds in vertical-profile soil samples collected during the 2006 investigation at Ramona, Kansas.

				Concentration (μg/kg)			
Location	Sample	Depth (ft BGL)	Sample Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dichloro-ethane
TI06	RATI06-S-21286	3	6/21/06	ND[a]	ND	ND	ND
TI06	RATI06-S-21287	7	6/21/06	ND	ND	ND	ND
TI06	RATI06-S-21288	11	6/21/06	ND	ND	ND	ND
TI06	RATI06-S-21289	13.5	6/21/06	ND	ND	ND	ND
TI06	RATI06-S-21290	18	6/21/06	ND	ND	ND	ND
TI06	RATI06-S-21291	22.5	6/21/06	ND	ND	ND	ND
TI06	RATI06-S-21292	26.5	6/21/06	ND	ND	ND	ND
TI06	RATI06-S-21293	30.5	6/21/06	ND	ND	ND	ND
TI06	RATI06-S-21295	33	6/22/06	ND	ND	ND	ND
TI06	RATI06-S-21296	37	6/22/06	ND	ND	ND	ND
TI06	RATI06-S-21297	42	6/22/06	ND	ND	ND	ND
TI06	RATI06-S-21298	45.5	6/22/06	ND	ND	ND	ND
TI06	RATI06-S-21299	49	6/22/06	ND	ND	ND	ND
TI06	RATI06-S-21300	53.5	6/22/06	ND	ND	ND	ND
TI06	RATI06-S-21301	56.25	6/22/06	ND	ND	ND	ND
TI06	RATI06-S-21302	61.5	6/23/06	ND	ND	ND	ND
TI06	RATI06-S-21303	65	6/23/06	ND	ND	ND	ND
TI06	RATI06-S-21304	68.5	6/23/06	ND	ND	ND	ND
TI07	RATI07-S-21308	2	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21309	6	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21310	9.25	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21311	14.5	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21312	16.75	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21313	21.25	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21314	25	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21328	29.5	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21329	33	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21330	37	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21331	41.25	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21332	45	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21333	50	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21334	52.75	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21335	57	6/22/06	ND	ND	ND	ND
TI07	RATI07-S-21336	61.5	6/23/06	ND	ND	ND	ND
TI07	RATI07-S-21337	64.5	6/23/06	ND	ND	ND	ND
TI07	RATI07-S-21338	69.5	6/23/06	ND	ND	ND	ND
TI07	RATI07-S-21339	74	6/23/06	ND	ND	ND	ND
TI07	RATI07-S-21340	77	6/23/06	ND	ND	ND	ND

TABLE 3.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Concentration (μg/kg) Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dichloro-ethane
TI10	RATI10-S-21431	2	7/6/06	ND	ND	ND	ND
TI10	RATI10-S-21432	4	7/6/06	ND	ND	ND	ND
TI10	RATI10-S-21433	5.3	7/6/06	ND	ND	ND	ND
TI10	RATI10-S-21434	6.4	7/6/06	ND	ND	ND	ND
TI10	RATI10-S-21435	11.5	7/6/06	ND	ND	ND	ND
TI10	RATI10-S-21436	13	7/6/06	ND	ND	ND	ND
TI10	RATI10-S-21437	15	7/6/06	ND	2.9 J[b]	ND	ND
TI10	RATI10-S-21438	17	7/6/06	ND	ND	ND	ND
TI10	RATI10-S-21440	22.5	7/6/06	ND	2.8 J	ND	ND
TI10	RATI10-S-21441	25	7/6/06	ND	ND	ND	ND
TI10	RATI10-S-21442	30	7/6/06	13	3.3 J	ND	ND
TI10	RATI10-S-21443	35	7/6/06	6.3 J	ND	ND	ND
TI10	RATI10-S-21444	39.5	7/6/06	14	3.6 J	ND	ND
TI10	RATI10-S-21460	42	7/7/06	12	ND	ND	ND
TI10	RATI10-S-21461	45.5	7/7/06	8.3 J	ND	ND	ND
TI10	RATI10-S-21462	46.5	7/7/06	5.6 J	ND	ND	ND
TI10	RATI10-S-21463	49	7/7/06	ND	ND	ND	ND
TI10	RATI10-S-21464	50.5	7/7/06	ND	ND	ND	ND
TI10	RATI10-S-21465	53	7/7/06	ND	ND	ND	ND

[a] ND, contaminant not detected at the instrument detection limit of 1.0 μg/kg.

[b] Qualifier J indicates an estimated concentration below the method quantitation limit of 10 μg/kg.

TABLE 3.2 Analytical results for volatile organic compounds in groundwater samples collected during the 2006 investigation at Ramona, Kansas.

				Concentration (μg/L)			
Location	Sample	Depth (ft BGL)	Sample Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dichloro-ethane
Vertical-profile sampling							
TI06	RATI06-W-21389	48–53	6/26/06	3.2	0.9 J[a]	ND[b]	ND
TI06	RATI06-W-21398	54–59	6/26/06	0.3 J	0.2 J	ND	ND
TI06	RATI06-W-21362	64–69	6/25/06	ND	ND	ND	ND
TI06	RATI06-W-21346	70–75	6/23/06	ND	ND	ND	ND
TI07	RATI07-W-21363	44–49	6/25/06	0.3 J	1.4	ND	ND
TI07	RATI07-W-21400	51–56	6/26/06	0.3 J	1.1	ND	ND
TI07	RATI07-W-21356	58–63	6/23/06	ND	ND	ND	ND
TI07	RATI07-W-21344	64–69	6/23/06	ND	ND	ND	ND
TI07	RATI07-W-21357	72–77	6/24/06	0.3 J	ND	ND	ND
TI07	RATI07-W-21306	80.5–85.5	6/21/06	ND	ND	ND	ND
TI08	RATI08-W-21397	41–46	6/26/06	ND	0.9 J	ND	ND
TI08	RATI08-W-21391	46–51	6/26/06	ND	0.2 J	ND	ND
TI08	RATI08-W-21383	58–63	6/29/06	ND	ND	ND	ND
TI08	RATI08-W-21359	65–70	6/25/06	ND	ND	ND	ND
TI09	RATI09-W-21388	46–51	6/26/06	2.5	0.7 J	ND	ND
TI09	RATI09-W-21399	51–56	6/26/06	0.7 J	0.4 J	ND	ND
TI09	RATI09-W-21409	58–63	6/28/06	2.4	0.4 J	ND	ND
TI09	RATI09-W-21411	65–70	6/28/06	1.1	0.3 J	ND	ND
TI10	RATI10-W-21364	46–51	6/25/06	23	2.0	ND	ND
TI10	RATI10-W-21370	51–56	6/26/06	1.4	0.2 J	ND	ND
TI10	RATI10-W-21387	58–63	6/26/06	0.2 J	ND	ND	ND
TI10	RATI10-W-21376	64.8–69.8	6/27/06	0.2 J	0.5 J	ND	ND
TI10	RATI10-W-21393	73.66–78.66	6/26/06	ND	ND	ND	ND
TI11	RATI11-W-21386	40–45	6/26/06	ND	0.2 J	ND	ND
TI11	RATI11-W-21396	51–56	6/26/06	0.4 J	ND	ND	ND
TI11	RATI11-W-21361	59–64	6/25/06	ND	ND	ND	ND
TI11	RATI11-W-21358	65–70	6/24/06	ND	ND	ND	ND
TI12	RATI12-W-21384	45–50	6/29/06	4.7	1.2	ND	ND
TI12	RATI12-W-21378	50–55	6/28/06	4.7	4.6	ND	ND
TI12	RATI12-W-21407	60–65	6/28/06	0.7 J	0.2 J	ND	ND
TI12	RATI12-W-21406	65–70	6/27/06	1.3	1.0	ND	ND

TABLE 3.2 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Concentration (μg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dichloro-ethane
Vertical-profile sampling (cont.)							
TI13	RATI13-W-21412	40–45	6/28/06	3.0	0.6 J	ND	ND
TI13	RATI13-W-21417	45–50	6/29/06	3.4	0.6 J	ND	ND
TI13	RATI13-W-21415	50–55	6/28/06	0.3 J	0.1 J	ND	ND
TI13	RATI13-W-21413	56–61	6/28/06	0.2 J	ND	ND	ND
TI13	RATI13-W-21395	63.75–68.75	6/27/06	ND	ND	ND	ND
TI14	RATI14-W-21414	55–60	6/28/06	0.7 J	ND	ND	ND
TI14	RATI14-W-21402	65–70	6/27/06	1.6	0.3 J	ND	ND
TI14	RATI14-W-21403	75–80	6/26/06	0.3 J	ND	ND	ND
TI14	RATI14-W-21401	82–87	6/26/06	0.3 J	ND	ND	ND
TI15	RATI15-W-21427	51–56	6/30/06	0.8 J	ND	ND	ND
TI15	RATI15-W-21424	56–61	6/29/06	0.2 J	ND	ND	ND
TI15	RATI15-W-21422	61–66	6/29/06	0.3 J	ND	ND	ND
TI15	RATI15-W-21416	66–71	6/29/06	ND	ND	ND	ND
TI15	RATI15-W-21380	71–76	6/29/06	ND	ND	ND	ND
TI15	RATI15-W-21410	76.4–81.4	6/28/06	ND	ND	ND	ND
TI16	RATI16-W-21428	58–63	6/30/06	ND	ND	ND	ND
TI16	RATI16-W-21426	65–70	6/29/06	ND	ND	ND	ND
TI16	RATI16-W-21425	70–75	6/29/06	ND	ND	ND	ND
TI16	RATI16-W-21423	76.5–81.5	6/29/06	ND	ND	ND	ND
TI17	RATI17-W-21456	48.8–53.8	7/6/06	2.1	0.6 J	ND	ND
TI17	RATI17-W-21458	57–62	7/7/06	0.4 J	ND	ND	ND
Piezometer sampling							
MW04[c]	RATI16-W-21449	45–55	7/13/06	ND	ND	ND	ND
MW05[d]	RATI17-W-21450	45–55	7/13/06	0.9 J	0.3 J	ND	ND
MW06	RATI18-W-21452	45–55	7/13/06	1.8	1.1	ND	ND
MW07	RATI19-W-21453	45–55	7/13/06	6.3	1.6	ND	ND
MW08	RATI20-W-21451	45–55	7/13/06	0.7 J	ND	ND	ND

[a] Qualifier J indicates an estimated concentration below the method quantitation limit of 1.0 μg/L.

[b] ND, contaminant not detected at the instrument detection limit of 0.1 μg/L.

[c] Piezometer MW04 was installed at the TI16 location.

[d] Piezometer MW05 was installed at the TI17 location.

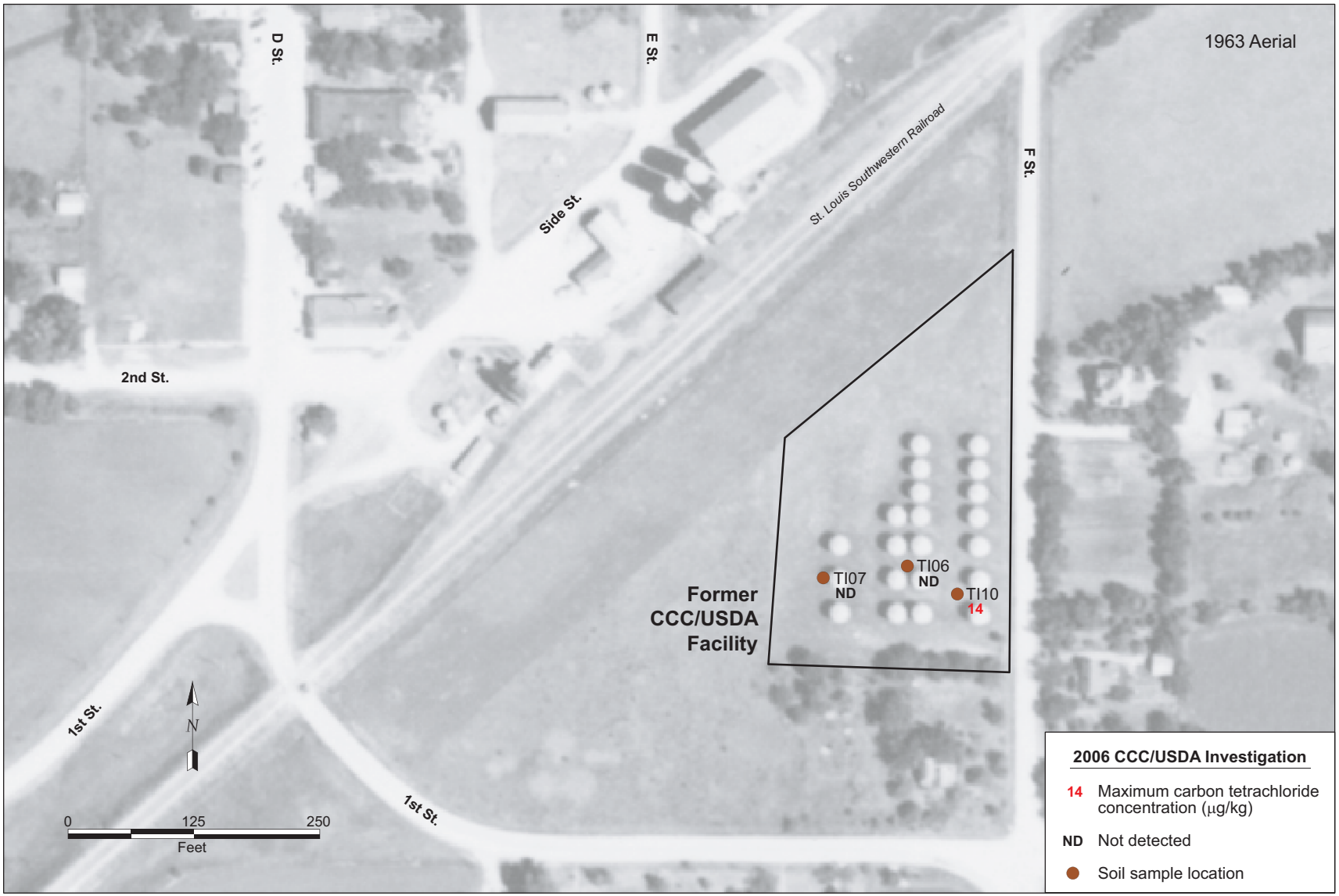


FIGURE 3.1 Maximum concentrations of carbon tetrachloride detected in soil samples collected on the former CCC/USDA property in 2006. Source of photograph: USGS (1963).

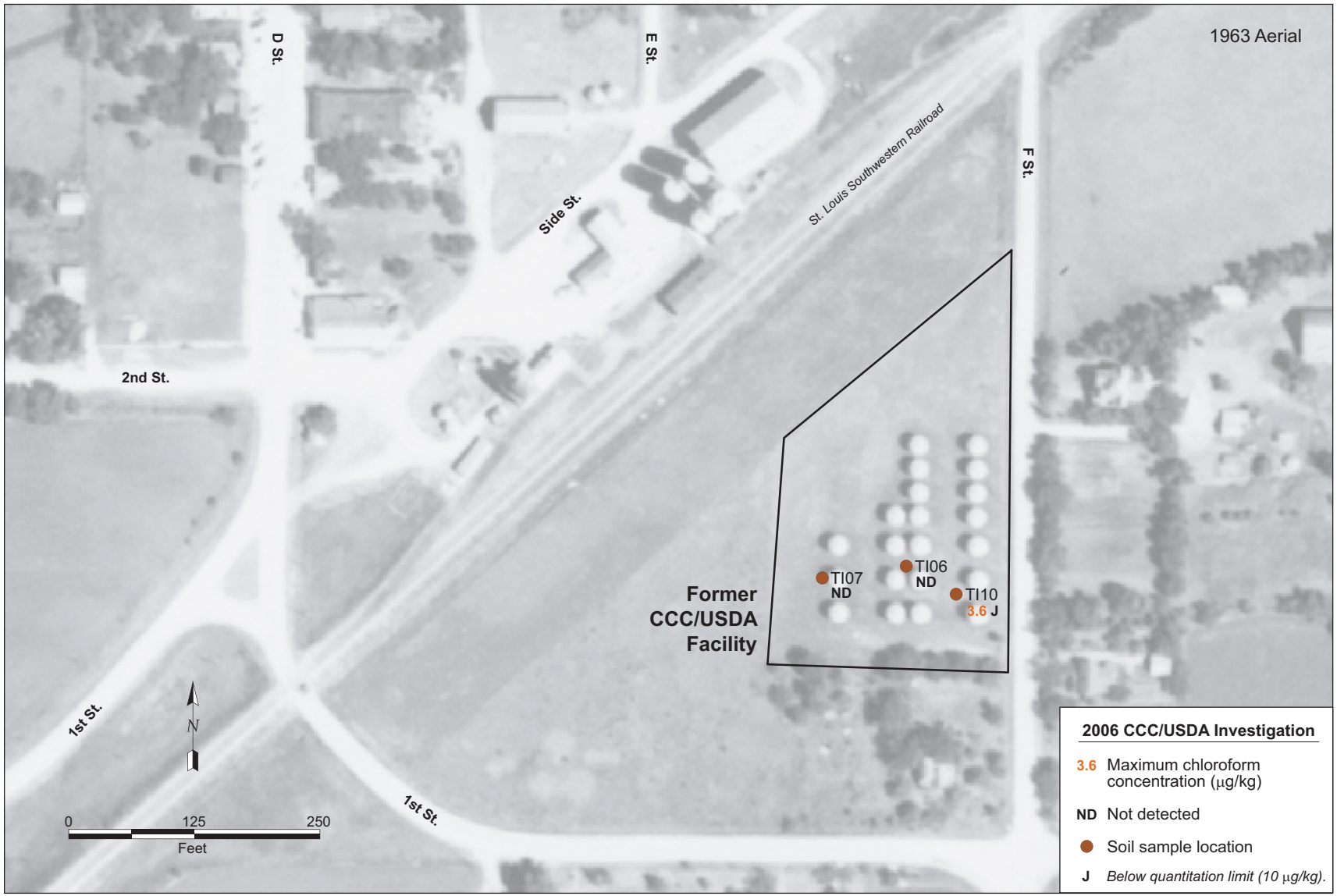


FIGURE 3.2 Maximum concentrations of chloroform detected in soil samples collected on the former CCC/USDA property in 2006. Source of photograph: USGS (1963).

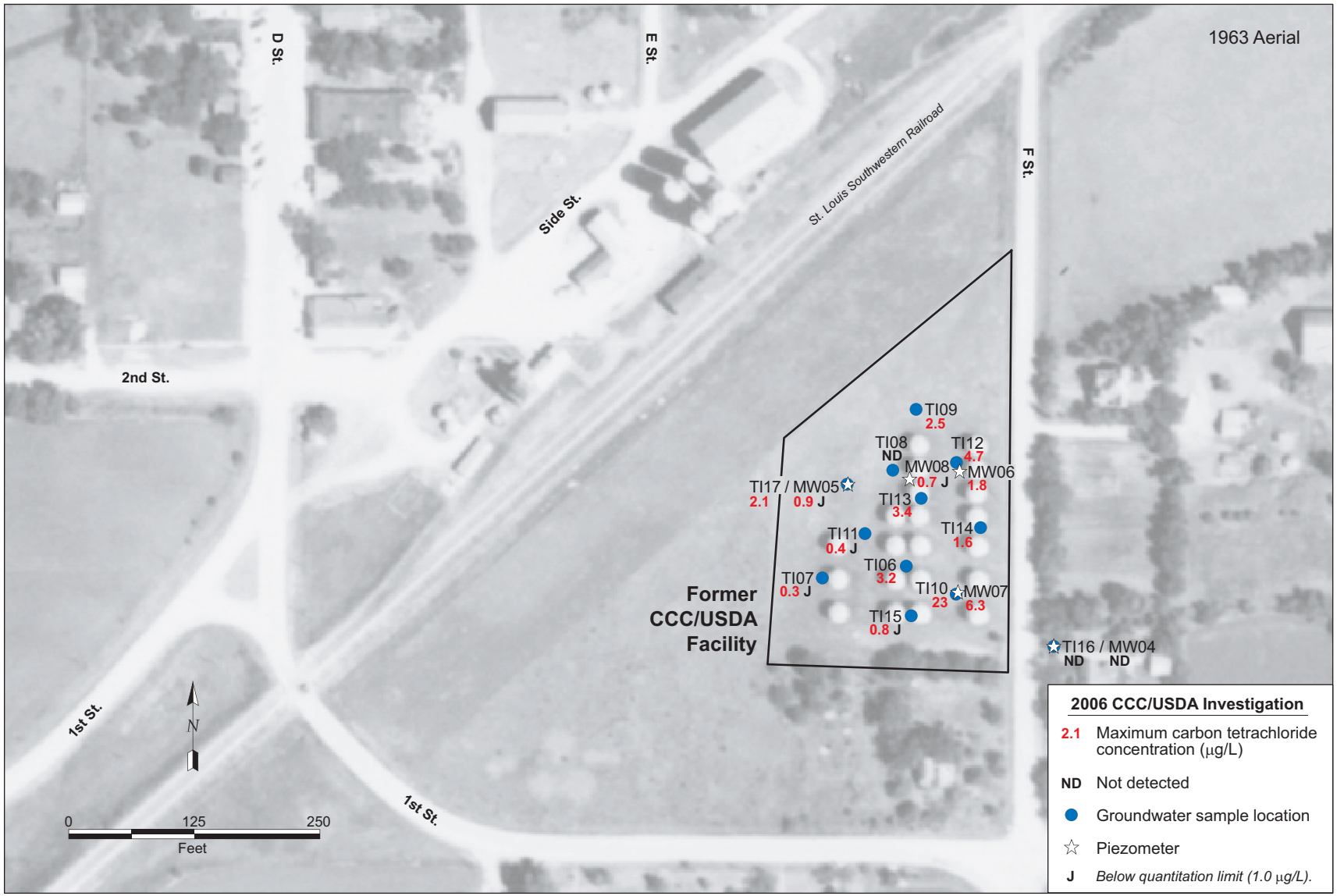


FIGURE 3.3 Maximum concentrations of carbon tetrachloride detected in groundwater samples collected on and upgradient from the former CCC/USDA property in 2006. Source of photograph: USGS (1963).

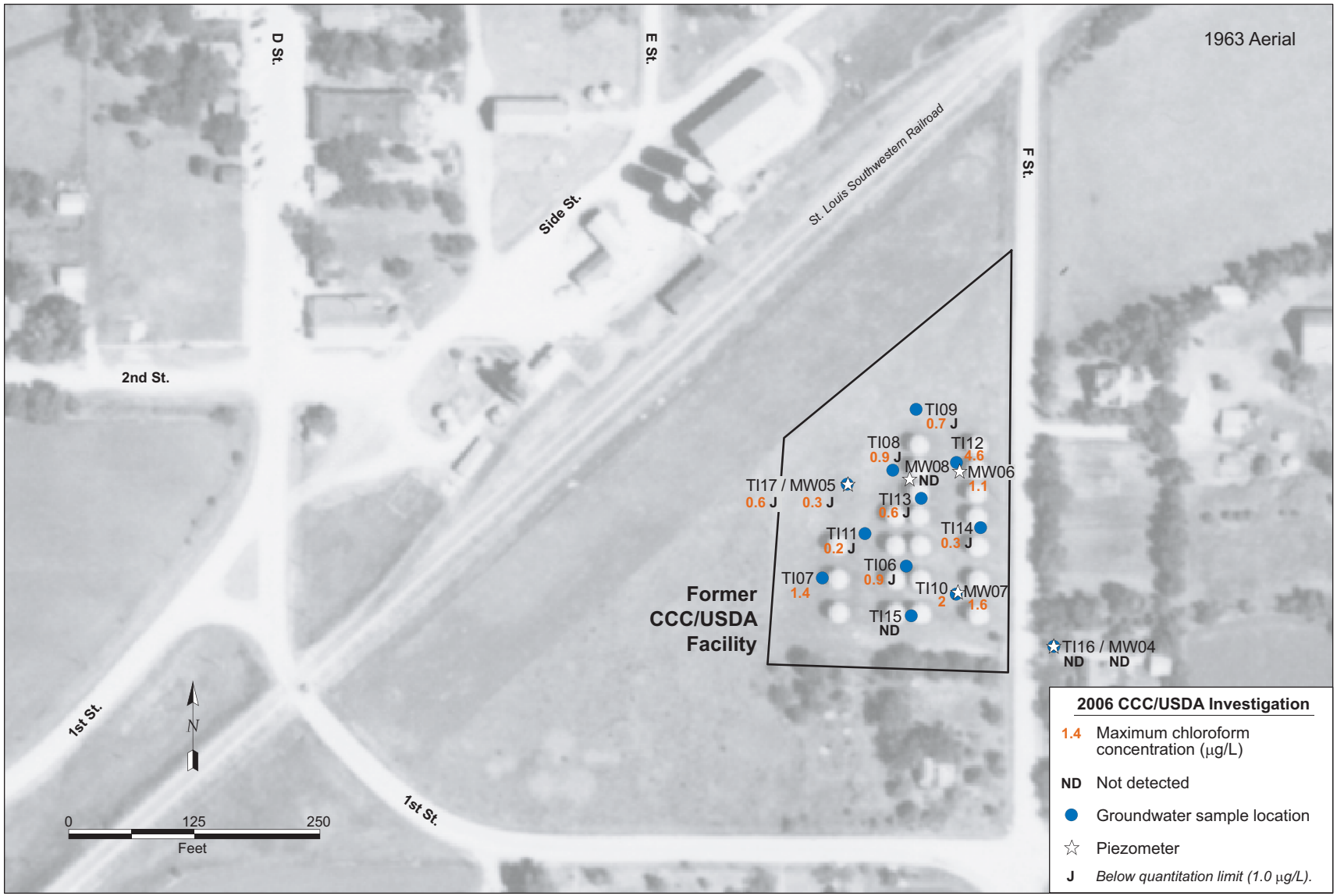


FIGURE 3.4 Maximum concentrations of chloroform detected in groundwater samples collected on and upgradient from the former CCC/USDA property in 2006. Source of photograph: USGS (1963).

4 Data Interpretation

The primary purpose of the 2006 investigation at Ramona was to investigate potential source areas and determine the extent of previously identified carbon tetrachloride contamination in groundwater. The results of the investigation are interpreted below.

4.1 Geologic and Hydrogeologic Conditions on the Former CCC/USDA Facility

Ramona lies in the Flint Hills physiographic province, which is noted for its steep east-facing escarpments (Schoewe 1949). Surface soils generally consist of silty clay loam underlain by shale of the Permian Wellington Formation.

The site lithology was identified through the collection of core samples from boreholes T06, TI07, and TI10. Detailed descriptions of the cores are in Appendix B. The predominant lithology consisted of silty clay to clayey silt with minor zones of silty clay with sand or gravel. Also observed at some depths were inclusions of calcite crystals that often showed vuggular porosity. No significant zones of sand or gravel were observed at any location on the former CCC/USDA property.

No zone that would indicate a potentially confining layer or a zone of lower permeability was encountered in any borehole until total depth was reached, at 62 -87 ft BGL. Total depth was indicated by refusal of the CPT to continue penetrating through the subsurface during probing activities. The depth to CPT refusal increased along the southern and eastern parts of the former CCC/USDA property, at TI06, TI07, TI10, TI14, and TI15 (locations shown in Figure 2.1; depths shown in Table 3.2). Refusal was encountered at these locations at depths ranging from 75 ft to 87 ft BGL. Along the northern and western parts of the property, the CPT refusal depth ranged from 62 ft BGL at TI17 to 70 ft BGL at TI11. Borehole TI17 is near the northwest corner of the former CCC/USDA property, and TI11 is nearby. The observed depth differentials could indicate potential migration pathways in the subsurface.

Data collected during this investigation indicate the presence of only one aquifer, at approximately 40-87 ft BGL. Vertical-profile groundwater samples were collected at 5-ft intervals throughout this zone. Core samples collected at selected locations to a depth of 77 ft BGL showed no indication of a confining layer or consolidated zone that would indicate the presence of separate aquifers.

The piezometers installed on the former CCC/USDA facility were screened at 45-55 ft BGL, in the only zone that exhibited carbon tetrachloride concentrations above the MCL and RBSL value of 5.0 µg/L. This zone produced minimal quantities of water in all piezometers. Groundwater depths varied across the site, ranging between approximately 46.5 ft and 52.5 ft BGL. Groundwater measured by hand in the new piezometers on July 20 and November 3, 2006, was consistently deepest at MW04 and shallowest at MW05 (Table S1.1 in Supplement 1, on CD). Measurements in the piezometers and monitoring wells indicate a north to northeasterly groundwater flow direction.

Figures 4.1 and 4.2 show four potentiometric surface maps with interpreted flow directions on July 20, September 1, October 15, and November 1, 2006. Historically, the groundwater flow direction measured in monitoring wells installed northwest of the former CCC/USDA property has indicated a northwesterly trend. These wells are across the railroad tracks and may be influenced by the creek that intersects the western part of Ramona (Figure 1.5).

4.2 Subsurface Contaminant Conditions on the Former CCC/USDA Facility

The methods described in Section 2 were used to collect soil samples from 3 CPT boreholes and groundwater samples from 12 CPT boreholes and 5 newly installed piezometers.

Soil samples from only one location (TI10) on the former CCC/USDA property contained low concentrations of carbon tetrachloride and trace levels of chloroform in the vadose zone (Figures 3.1 and 3.2). The soil samples containing detectable concentrations of carbon tetrachloride were collected immediately above the saturated zone, at depths ranging from 30 ft to 46.5 ft BGL. Trace levels of chloroform were detected at depths as shallow as 15 ft BGL. The highest concentration of carbon tetrachloride was 14 µg/kg at 39.5 ft BGL in borehole TI10; this concentration does not exceed the RBSL of 200 µg/kg established by the KDHE for the soil-to-groundwater protection pathway. These low concentrations in soil do not account for the observed groundwater impacts at higher concentrations. Therefore, the results of the 2006 investigation at Ramona do not support identification of subsurface soil on the former CCC/USDA property as an ongoing significant source for contamination.

The analytical data for groundwater samples collected from the CPT boreholes and piezometers indicate that the carbon tetrachloride and chloroform contamination in groundwater (at concentrations above the MCL and RBSL value of 5.0 µg/L) is confined to the upper part of the aquifer in a small area on the former CCC/USDA property. Figure 4.3 shows the isolated carbon tetrachloride plume interpreted to lie entirely on the former CCC/USDA property. The deeper part of the aquifer (55 ft BGL to CPT refusal at 87 ft BGL) showed no contaminant concentrations above the MCL and RBSL value of 5.0 µg/L.

Figure 3.3 shows the highest concentrations of carbon tetrachloride detected in groundwater at each location. The highest carbon tetrachloride concentration detected in the groundwater at any sampling location was 23 µg/L (46-51 ft BGL) at locationTI10, in the southeast corner of the property. A sample from piezometer MW07, installed adjacent to this location, contained carbon tetrachloride at 6.3 µg/L at 45-55 ft BGL. Samples from all other locations showed concentrations ranging from below the AGEM Laboratory method detection limit (1.0 µg/L) to 4.7 µg/L.

Figure 3.4 shows the highest concentrations of chloroform detected in groundwater at each location. Trace to low concentrations of chloroform were detected at locations throughout the investigation area; however, none of the detected concentrations exceeded the RBSL of 80 µg/L.

The analytical results for groundwater samples indicate that the contaminant plume related to the former CCC/USDA property is minor and that the full extent of contamination associated with CCC/USDA activities is limited to the area within the property boundaries.

A previous investigation conducted by the KDHE generated similar results (KDHE 2006). In 2006, the KDHE collected groundwater samples at two direct-push locations on the former CCC/USDA property: SB-08 (in the southeastern part of the property, near the CCC/USDA 2006 locations TI10 and MW07) and location SB-07 (in the northeastern corner of the site, slightly north of the CCC/USDA 2006 location TI12). Figure 4.4 shows the lateral extent of the contaminant plume, as interpreted by the KDHE from the results for these two locations. The KDHE results were as follows:

- Carbon tetrachloride was detected at 5.8 µg/L in a sample collected at 47.5-52.5 ft BGL at the southeastern location (SB-08). Only a limited amount

of water (40 mL) was available at SB08 for analysis. The static water level was reported to be 52.25 ft BGL, and total depth was 52.5 ft BGL.

- No carbon tetrachloride was detected in a sample collected at 53-58 ft BGL at the northeastern location (SB-07).

- Only one of six groundwater samples collected at six direct-push locations along the east side of the railroad tracks, between the former CCC/USDA property and the Co-op property, contained a trace concentration of carbon tetrachloride (0.67 µg/L at SB-03; Figure 4.4). This sample also contained trace to low concentrations of several petroleum-related compounds. Similar analytical results were obtained for several sampling locations on the Co-op property. None of the petroleum-related compounds were detected on the former CCC/USDA property. This finding would support a separation of source areas.

The data collected during both the 2006 CCC/USDA investigation and the 2006 KDHE investigation demonstrate that contamination associated with past activities on the former CCC/USDA property is limited to a small area and is distinct from contamination detected on the Co-op property or at other locations west of the railroad tracks. The KDHE concluded in its 2006 report (KDHE 2006, page 10) that the contamination detected on the former CCC/USDA property appeared to be separate from the source areas identified on the Co-op property (west of the railroad tracks). The KDHE further concluded that a near-surface source area had been identified on the Co-op property and stated (KDHE 2006, pages 9 and 10), “It appears the principal source of carbon tetrachloride contamination in Ramona results from historical operations associated with the Co-op property.”

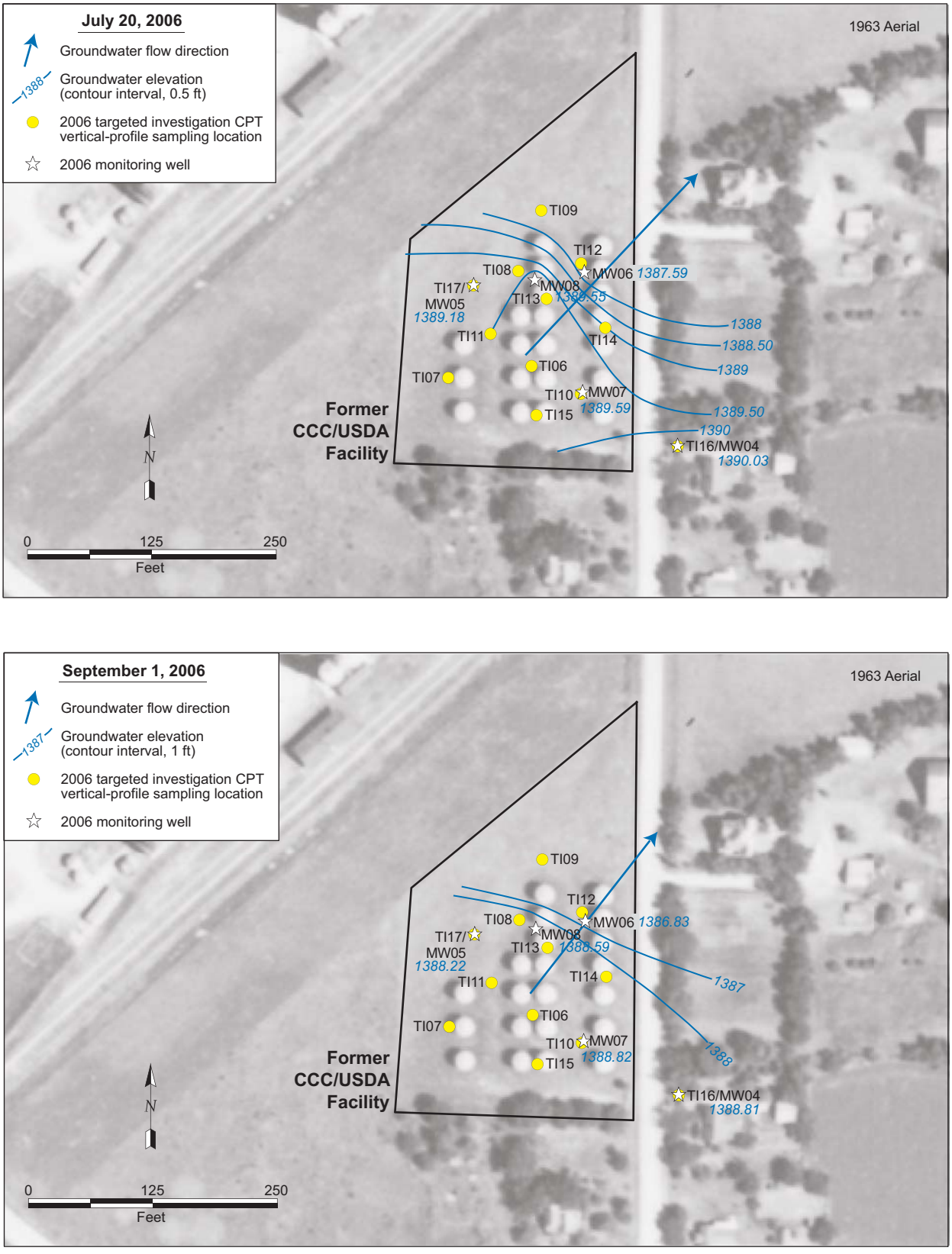


FIGURE 4.1 Potentiometric surface at Ramona, as interpreted from water level measurements made on July 20, 2006 (top), and September 1, 2006 (bottom). Source of photograph: USGS (1963).

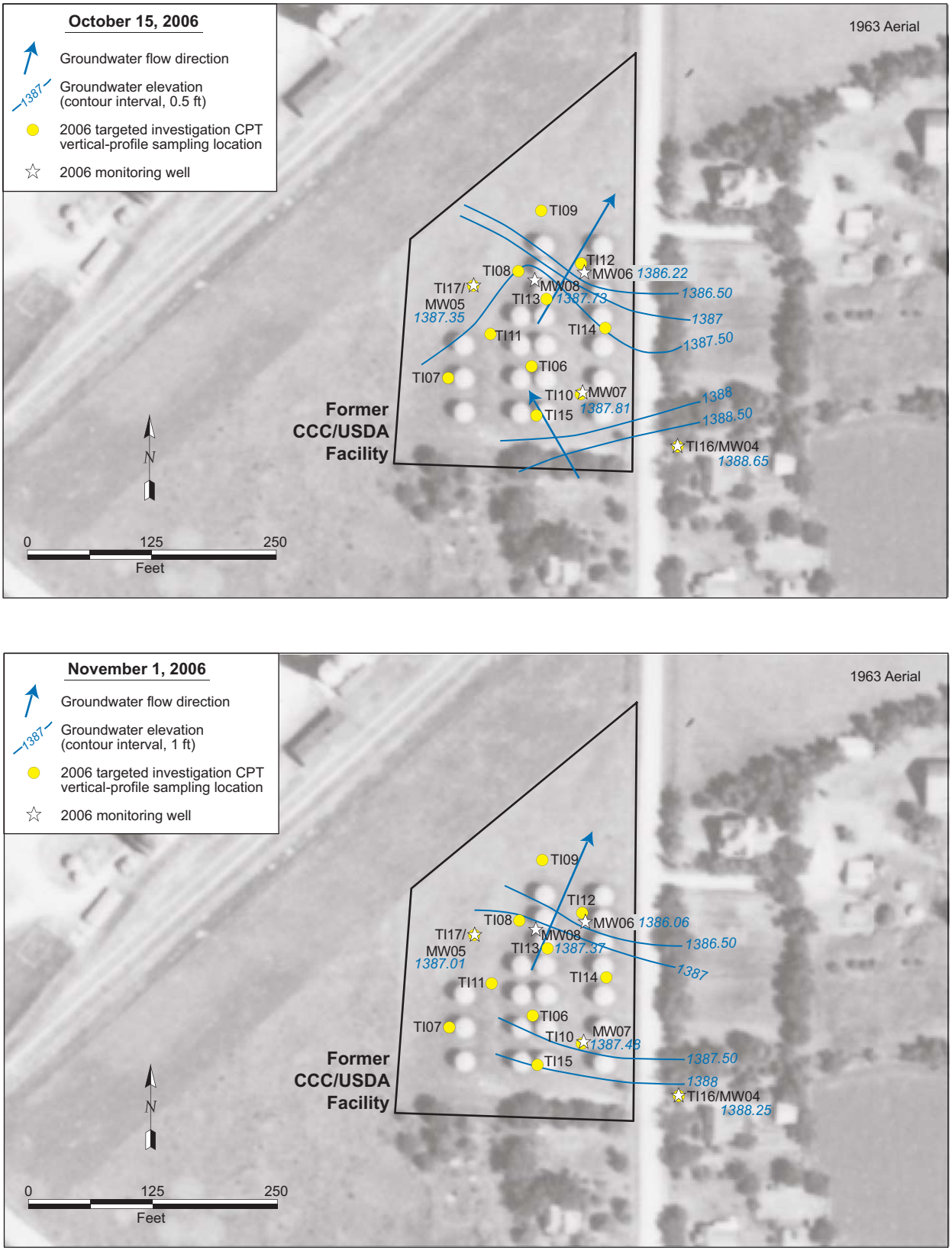


FIGURE 4.2 Potentiometric surface at Ramona, as interpreted from water level measurements made on October 15, 2006 (top), and November 1, 2006 (bottom). Source of photograph: USGS (1963).

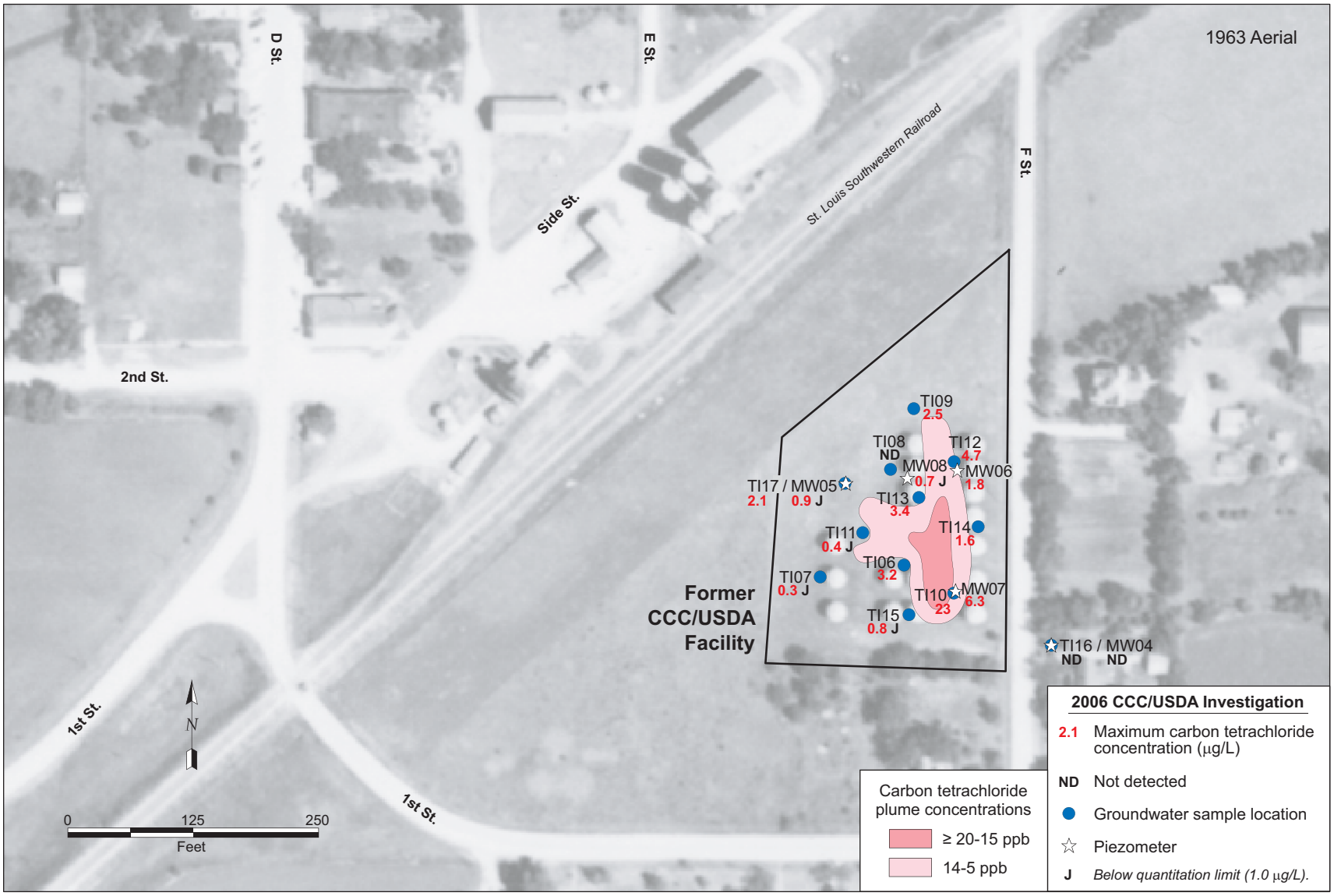
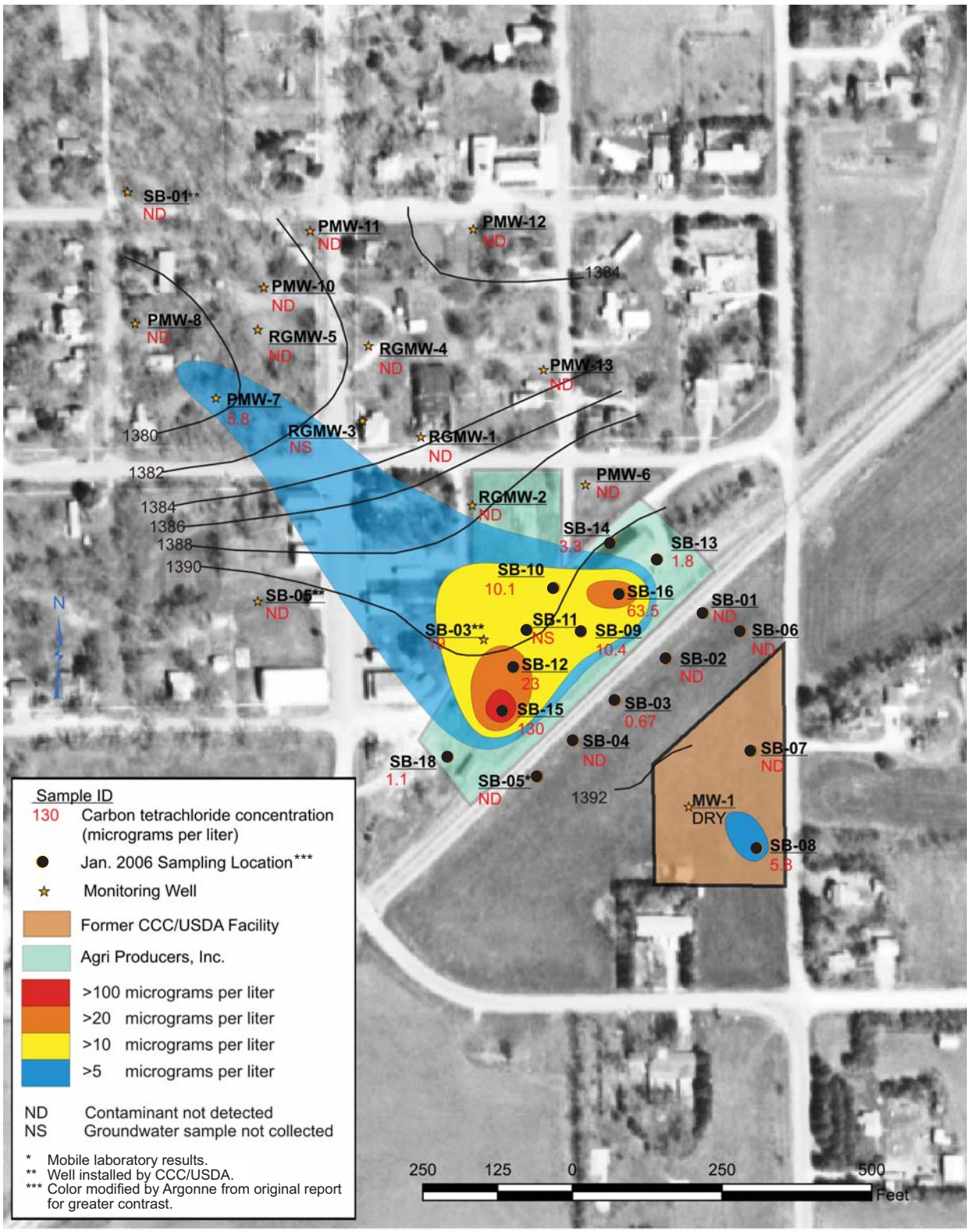


FIGURE 4.3 Interpreted lateral distribution of carbon tetrachloride in groundwater on the former CCC/USDA property at Ramona, based on results of the CCC/USDA investigation in 2006. Source of photograph: USGS (1963).



Source of Photograph: USGS (2002)
Map generated by KDHE/BER using ESRI® ArcGIS v.9.1 and CorelDraw v.13.0.0.576

FIGURE 4.4 Interpreted lateral distribution of carbon tetrachloride in groundwater in the wider area at Ramona, based on results of the KDHE investigation in 2006. Source: KDHE (2006).

5 Conclusions and Recommendations

5.1 Conclusions

The analytical data collected on the former CCC/USDA property during the 2006 investigation at Ramona support the following conclusions:

- *No ongoing soil source of carbon tetrachloride contamination is present on the former CCC/USDA property.* Soil samples from only one borehole (TI10) contained detectable concentrations of carbon tetrachloride or chloroform. None of the detected concentrations exceeded the RBSL of 200 µg/kg for the soil-to-groundwater protection pathway. The trace to low concentrations detected were below the concentrations detected in the shallow groundwater sample collected at this same location. The low level of soil contamination detected in the vadose zone at this location is not expected to cause higher concentrations in the groundwater. Therefore, the soil is not an ongoing significant source of contamination.

- *The levels of carbon tetrachloride contamination detected in groundwater on the former CCC/USDA property are relatively low and are limited vertically and laterally, and they do not present a current threat, nor are they expected to pose a long-term threat.* The highest carbon tetrachloride concentrations identified in groundwater during the investigation were 23 µg/L at 46-51 ft BGL at boring TI10 and 6.3 µg/L at 45-55 ft BGL in well MW07. The extent of the source area at these locations was defined by analytical data collected at downgradient and cross gradient locations TI07, TI08, TI09, TI15, TI16, and TI17. The highest carbon tetrachloride concentration detected at these locations was 2.5 µg/L. Carbon tetrachloride and chloroform levels detected in groundwater samples from all of these locations were below the MCL and the RBSL values of 5.0 µg/L and 80 µg/L, respectively. These results indicate that the full vertical and lateral extent of the contamination has been identified and that the concentrations do not present a current threat that would warrant remediation. Furthermore, investigation in the deeper part of the aquifer (below 55 ft BGL) is not warranted, because contamination was not detected at concentrations above the MCL or RBSL from 55 ft BGL to CPT refusal (at 62-87 ft BGL).

- *Groundwater contamination detected on the former CCC/USDA property is separate from contamination detected at off-site locations.* Groundwater contamination at concentrations above the MCL and RBSL value of 5.0 µg/L was detected in only two groundwater samples (from TI10 and MW07) collected on the former CCC/USDA property. The extent of carbon tetrachloride and chloroform contamination (at concentrations above the MCL and RBSL) associated with past activities on the former CCC/USDA property is confined to the area within the property boundaries. Data collected by the KDHE in 2006 validate these findings and provide additional evidence that the sources identified on the Co-op property are separate from any past activities on the former CCC/USDA property. The KDHE concluded that the Co-op was the principally responsible party for the carbon tetrachloride contamination detected during its 2006 investigation.

- *The detection of chloroform indicates that natural degradation of carbon tetrachloride is occurring.* Chloroform was detected in both soil and groundwater samples at various depths.

- *Groundwater depth data collected beneath the former CCC/USDA property (east of the railroad tracks) during the investigation indicate that flow is toward the north to northeast.* Water levels measured continuously in the newly installed monitoring wells (MW04-MW08) over a period of many months consistently indicate this direction. In contrast, historical data collected at locations west of the former CCC/USDA property (west of the railroad tracks) indicate a northwesterly flow direction in that area. The flow direction measured west of the tracks may be affected by a stream that cuts through the west side of Ramona.

- *One aquifer was identified during investigation activities.* During the 2006 CCC/USDA investigation, groundwater was encountered continuously throughout the stratigraphic column on the former CCC/USDA property, at depths from 40 ft to 87 ft BGL. No potentially confining layers or zones of lower permeability were encountered above depths of 62-87 ft BGL. These two factors indicate that only one aquifer is present to the total depths investigated.

- *Ramona residents have access to a public water supply source.* In September 1995, residents were provided with access to Marion County RWD #1 by the USDA Farmers Home Administration agency.

5.2 Recommendations

The following recommendations are based on the interpretation of analytical data collected during this investigation and observations made during field activities.

- *Soil contamination detected on the former CCC/USDA property does not require remediation.* Carbon tetrachloride concentrations detected in soils collected from the vadose zone on the former CCC/USDA property did not exceed the RBSL of 200 µg/kg for the soil-to-groundwater protection pathway; therefore, no remediation of soils is required or recommended.

- *Groundwater contamination detected on the former CCC/USDA property does not require remediation.* Carbon tetrachloride contamination in groundwater (at concentrations above the RBSL and MCL value of 5.0 µg/L) is confined to a small area on the southeast corner of the former CCC/USDA property. The low concentrations detected do not warrant remediation, and therefore none is recommended.

- *Groundwater monitoring program.* The only action recommended at the Ramona site is twice yearly monitoring for two years to support reclassification of the site to *No further Action* status, in accordance with the Intergovernmental Agreement between the KDHE and the Farm Service Agency of the USDA.

6 References

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Appendix A:

Property Documentation

LEASE WITH OPTION TO PURCHASE

Filed January 18, 1951 at 11 A.M. Lillian Pierce, Register of Deeds
By Ellen Garrison, Deputy

THIS LEASE, made and entered into this 21st day of April, 1950, by and between Mrs. Anna Hoeppner of Ramona, Kansas, Lessor, and Commodity Credit Corporation, Lessee.

WITNESSETH THAT:

1. The Lessor leases to the Lessee, and the Lessee hereby leases from the Lessor, upon the terms and conditions hereinafter stated, the following described real estate (hereinafter called "property") situated in the County of Marion and State of Kansas:

172

MISCELLANEOUS RECORD No. 73

One acre (Pt. SE¼ 2-17-3) beginning north of Building on east line thence north to R.R. Right of Way, SW along right of way 18 rods, thence south 14 rods to point of beginning.

2. The term of the lease shall be for a period of 15 years, commencing the 21st day of April, 1950, and ending the 21st day of April, 1965, with the right of the Lessee to terminate said lease, and liability for any further rent, on the 21st day of April of any year, by giving 30 days' previous notice in writing to the Lessor.

3. As rent for said property, the Lessee shall pay the Lessor Fifteen and no/100 Dollars ($15.00) per year, such rent to be payable April 21 of each year.

4. The Lessor warrants that he is the owner of the property, has the right to give the Lessee possession under this lease, and will, so long as this lease remains in effect, warrant and defend the Lessee's possession against any and all persons whomsoever.

5. The Lessee shall have the right to construct or erect storage structures or facilities on said property and, at the expiration of said lease or any renewal or extension thereof or at any time this lease is in effect, may remove said storage structures or facilities or any part thereof, whether or not such structures or facilities have become legally a fixture.

6. The Lessee shall not assign this lease nor sublet said property or any part thereof without the written consent of the Lessor.

7. (Special provisions)

8. The Lessor grants and gives the Lessee the option, at any time while this lease is in effect, to purchase said property from the Lessor, his heirs, executors, administrators, and assigns, for the sum of - - - Dollars ($ - -). In the event the Lessee shall exercise this option to purchase said property, the Lessor agrees to execute a good and sufficient warranty deed conveying fee simple title to said property free and clear of all taxes, liens, or encumbrances except for the following, and no other:

Anna Hoeppner, Lessor

Subscribed before me a Notary Public this 16th day of Jan., 1951.

C. O. DANITSCHEK
NOTARY PUBLIC
MARION COUNTY,
KANSAS

C. O. Danitschek, Notary Public
(Title)
My Commission Expires Jan. 17, 1952

COMMODITY CREDIT CORPORATION, LESSEE
By Floyd Fike, Contracting Officer

M143 399

FORM CCC GRAIN-19
(12-9-63)

U. S. DEPARTMENT OF AGRICULTURE
Agricultural Stabilization and Conservation Service
Commodity Credit Corporation

LEASE OF PROPERTY

THIS LEASE, made and entered into this _____ day of May 9, 19 64, by and between Godfrey Schneider and Olga Schneider of Ramona, Kansas *(hereinafter called the "Lessor")*, and Commodity Credit Corporation, *(hereinafter called the "Lessee")*.

WITNESSETH THAT:

1. The Lessor leases to the Lessee, and the Lessee hereby leases from the Lessor, upon the terms and conditions hereinafter stated, the following described real estate *(hereinafter called "property")* situated in the County of Marion and State of Kansas

(Enter here a complete legal description of the site)

Pt. of SE¼ 2-17-3, East of 6th P.M. beginning in the NE corner at the point of intersection of the east boundary line of said property and the south side of the CRIP Railroad right of way thence south westerly 18 rods along the south side of the CRIP Railroad right of way thence south 14 rods on said property thence east 14½ rods to east boundary line of said property thence north to point of beginning.

399
May 64
Elma Wiebe

1.35 G-X

containing 1½ acres, more or less.

2. The term of the lease shall be for a period of 10 years, commencing the 21st day of April 19 65 and ending the 20th day of April, 19 75, with the right of the Lessee, at any time during such term or any extension thereof, to terminate said lease, and liability for any further rent, by giving 30 days' previous notice in writing to the Lessor.

3. As rent for said property, the Lessee shall pay the Lessor One Hundred & no/100 Dollars ($ 100.00) per year, such rent to be payable in advance, but to be apportionable in the event the lease is terminated as provided in paragraph 2 hereof.

4. The Lessor warrants that he is the owner of the property, has the right to give the Lessee possession under this lease, and will, so long as this lease remains in effect, warrant and defend the Lessee's possession against any and all persons whomsoever.

5. The Lessee shall have the right, during this lease, to erect storage structures or facilities, make alterations, install scales, fences, or signs, in or upon the premises hereby leased and, at the expiration of said lease or any renewal or extension thereof or at any time this lease is in effect, may remove said storage structures, facilities, scales, fences or signs or any part thereof, whether or not such structures, facilities, scales, fences or signs have become legally a fixture.

6. The Lessee shall not assign this lease without the written consent of the Lessor. The Lessee, may, however, sublet the structures on the premises leased hereunder, or any one or more of them for the term of the lease or any part thereof upon such terms and conditions as Lessee may wish to so sublet.

7. The Lessee, if required by the Lessor, shall upon the expiration of this lease, restore the premises to the same condition as that existing at the time of first entering upon the same under this lease or under any prior lease from the Lessor to the Lessee which has been continuous, reasonable and ordinary wear and tear and damages by the elements or by circumstances over which the Lessee has no control excepted: Provided, however, That if the Lessor requires such restoration, the Lessor shall give written notice thereof to the Lessee 60 days before the termination of the lease.

8. The Lessor grants and gives the Lessee the option as a consideration of this lease and for the further consideration of one dollar, the receipt of which is hereby acknowledged, to renew said lease for a period of 5 years from the Lessor, his heirs, executors, administrators, and assigns, for the sum of One Hundred and no/100 Dollars ($ 100.00) per year.

9. As a consideration of this lease and for the further consideration of one dollar, the receipt of which is hereby acknowledged, the Lessor grants and gives the Lessee the option, at any time while this lease is in effect, to purchase said property from the Lessor, his heirs, executors, administrators, and assigns, for the sum of One Thousand Five Hundred Dollars ($ 1500.00). In the event the Lessee shall exercise this option to purchase said property, the Lessor agrees to furnish at his own expense an abstract of title, certificate of title, or other evidence of title satisfactory to CCC and to execute a good and sufficient warranty deed conveying fee simple title to said property free and clear of all taxes, liens, or encumbrances except for the following, and no others.

400

FORM CCC GRAIN-19 (REVERSE)

10. In the event any increased tax assessment is made against the Lessor or the property by virtue of the erection of storage structures and facilities thereon by the Lessee, the Lessor agrees to cooperate fully in any contest of such increased assessment which the Lessee feels should be made. The Lessee agrees that the rental hereunder shall be adjusted upward by the amount of any such increased tax assessment which the Lessor and Lessee mutually agree to be proper or which is determined to be legally valid in court proceedings.

11. No member of or Delegate to Congress or Resident Commissioner, shall be admitted to any share or part of this lease or purchase or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this lease or purchase if made with a corporation for its general benefit.

12. The Lessor warrants that he has not employed any person to solicit or secure this lease upon any agreement for a commission, percentage, brokerage, or contingent fee and that no such consideration or payment has been or will be made. Breach of this warranty shall give CCC the right to annul the lease, or, in its discretion, to deduct from the rental or purchase price the amount of such commission, percentage, brokerage, or contingent fees. This warranty shall not apply to commissions payable by the Lessor if the lease is secured or made through a bona-fide agent maintained by the Lessor for the purpose of leasing or selling his property.

COMMODITY CREDIT CORPORATION, LESSEE

(Seal) Godfrey Schmieder, LESSOR

By Edmund Steiner

(Seal) [illegible], LESSOR

Chairman, Marion ASC County Committee

Contracting Officer

, WITNESS

ACKNOWLEDGMENT

I, Mary L Applegate, do hereby certify that Godfrey Schmieder to me known to be the person (or persons) who executed the foregoing instrument, personally appeared before me and acknowledged that he (she or they) executed the same as his (her or their) free act and deed and, in case said instrument was executed on behalf of a corporation, that he (she or they) as _____ (insert name of officer(s) and his (her or their) official title(s)) _____ was (were) duly authorized by the Board (Name of Corporation) of Directors of said corporation to execute the said instrument on behalf of said corporation and to affix the corporate seal thereto.

Given under my official hand and seal this day of May 8, 1964

My commission expires April 30 - 1968

Mary L Applegate

Notary Public

CERTIFICATION OF TRUE COPY

The undersigned hereby certifies that the foregoing Lease of Property is true, correct and authentic copy of an original lease duly executed by the lessor as above set forth.

Recording Official or Notary Public

RECEIPT OF COUNTY RECORDING OFFICIAL

The above Lease of Property or a true copy thereof was recorded or filed for record on _____, 19__, in _____ Volume _____ (Chattel Mortgage or real estate records, or other)

Page _____, No. _____ (If Filed)

State of _____, County of _____

County Recording Official

Agricultural Stabilization & Conservation County Committee

State of Kans.
Nov. 74
Alma Jean Blake
Kathleen Stevenson
4.00

RELEASE

KNOW ALL MEN BY THESE PRESENTS:

That on the 21st day of April, 1965, Commodity Credit Corporation, as lessee, secured from one Godfrey Schneider and Olga Schneider, as lessors, a certain lease dated May 8, 1964, and recorded in Book Misc. 143 at Page 399, which lease covered a term of ten (10) years, ending April 20, 1975, on the following described real estate situated in Marion County, Kansas, to-wit:

> Part of the Southeast Quarter (SE/4) of Section 2, Township 17 South, Range 3 East of the 6th P.M., described as: Commencing at the Southeast corner of the Southeast Quarter (SE/4) of Section 2-17S-3E, thence north to the right-of-way and depot grounds of the Chicago, Rock Island and Pacific Railway Company, thence in a southwesterly direction along the south line of said right-of-way and depot grounds to the south line of said section, thence east along the south line of said section to the place of beginning;

which said lease further had therein contained a provision for renewal of lease or purchase of said land described in said lease.

That for a portion of the time of such lease, said lessee did in fact use said premises for the storage of grain bins constructed thereon and for the storage of certain grains in said bins, but that on or about the 2nd day of May, 1966, said Commodity Credit Corporation caused said storage bins to be removed from said premises above described and did in fact at such time prepare, execute and forward to said lessors above named a release of such lease, without exercising the option of renewal or purchase, it being now understood and represented that said release of said lease above described was not recorded by said original lessors and has become lost or misplaced.

NOW, THEREFORE,

KNOW ALL MEN BY THESE PRESENTS that Commodity Credit Corporation, an agency of the Department of Agriculture of the United States, by Larry Jost, its duly authorized representative,

does hereby release and surrender such lease above described to Godfrey Schneider and Olga Schneider, as lessors, and their assigns, and does hereby and by these presents discharge, surrender and quit claim all of the right, title and interest of any kind and nature to said Godfrey Schneider and Olga Schneider, his wife, and their assigns, and does hereby represent and covenant that the said Commodity Credit Corporation claims no right, title, interest or estate of any kind or nature in or to the real estate hereinabove described.

IN WITNESS WHEREOF, I have hereunto set my hand on behalf of Commodity Credit Corporation, this 11th day of November, 1974.

COMMODITY CREDIT CORPORATION

By _____

STATE OF KANSAS)
) ss
MARION COUNTY)

BE IT REMEMBERED, that on this 11th day of November, 1974, before me, the undersigned, a notary public in and for the County and State aforesaid, came Larry Jost, duly appointed County Chairman of Marion County, Kansas, for Commodity Credit Corporation, an agency of the Department of Agriculture of the United States, who is personally known to me to be the same person who executed the within instrument of writing and such person duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal, the day and year last written above.

_____
Notary public

My Commission Expires:

PETER SCHULTHEIS
Notary Public, Marion County, Kansas
My Commission Expires Jan. 10, 1978

Appendix B:

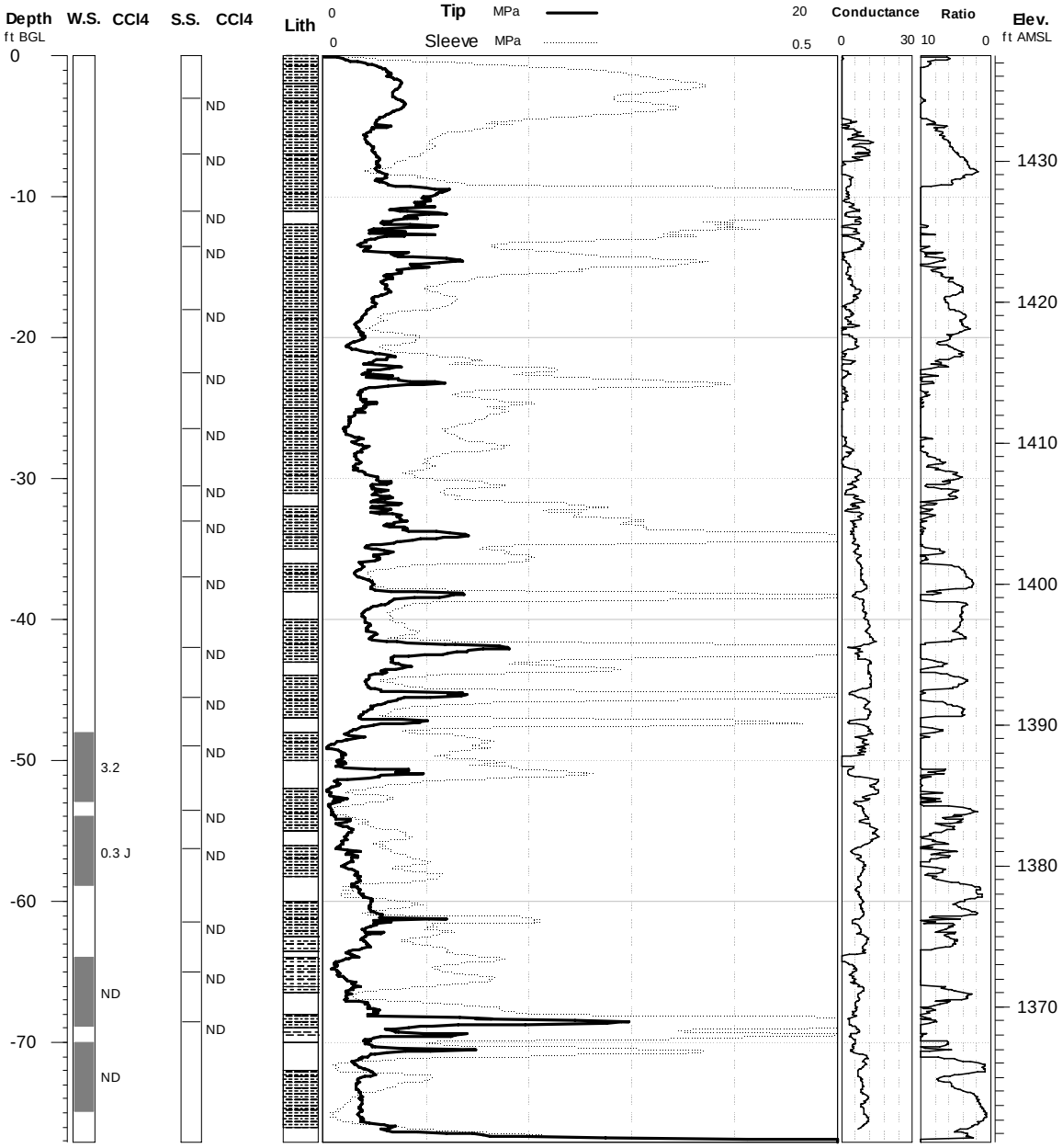
Electronic and Lithologic Logs

Argonne National Laboratory

Boring ID: TI-06

Project: Ramona, KS **Elevation:** 1437.485 ft.

Geologist: Lisa Larsen **Depth:** 77.034 ft. BGL **Log Date:** 6/21/2006



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

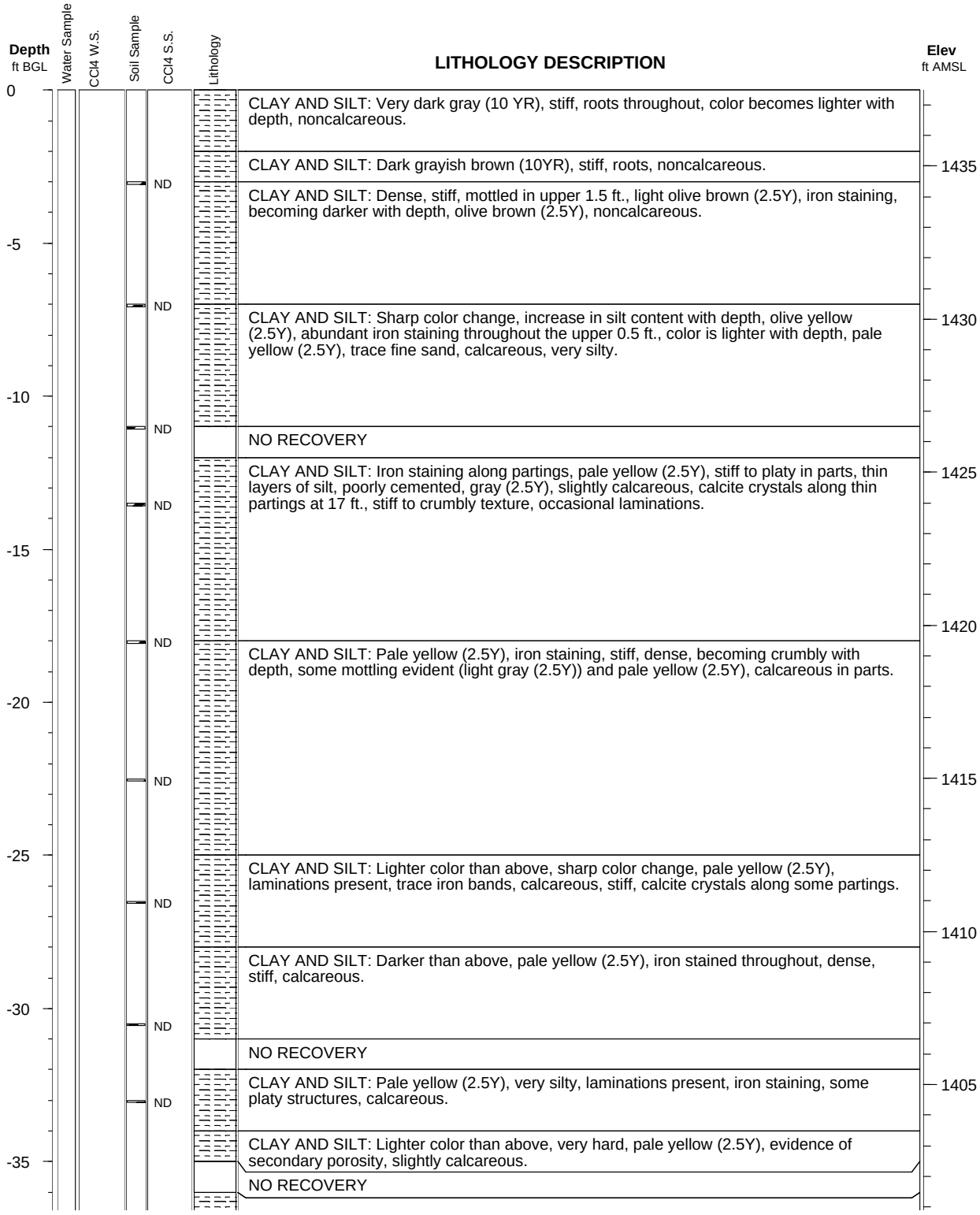
Boring ID: TI-06

Project: Ramona, KS

Elevation: 1437.485 ft.

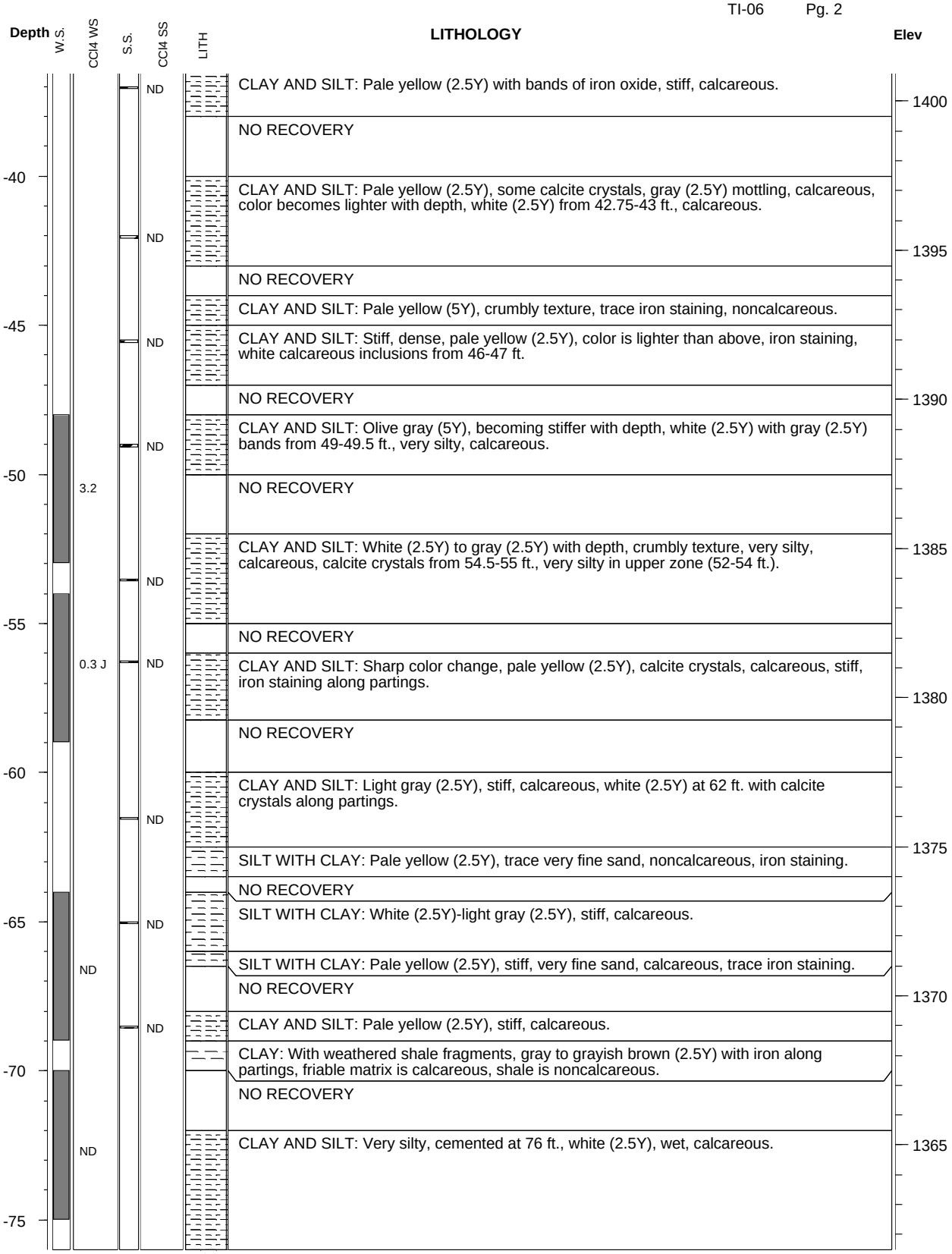
Geologist: Lisa Larsen

Depth: 77.034 ft. BGL



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-06 Pg. 2



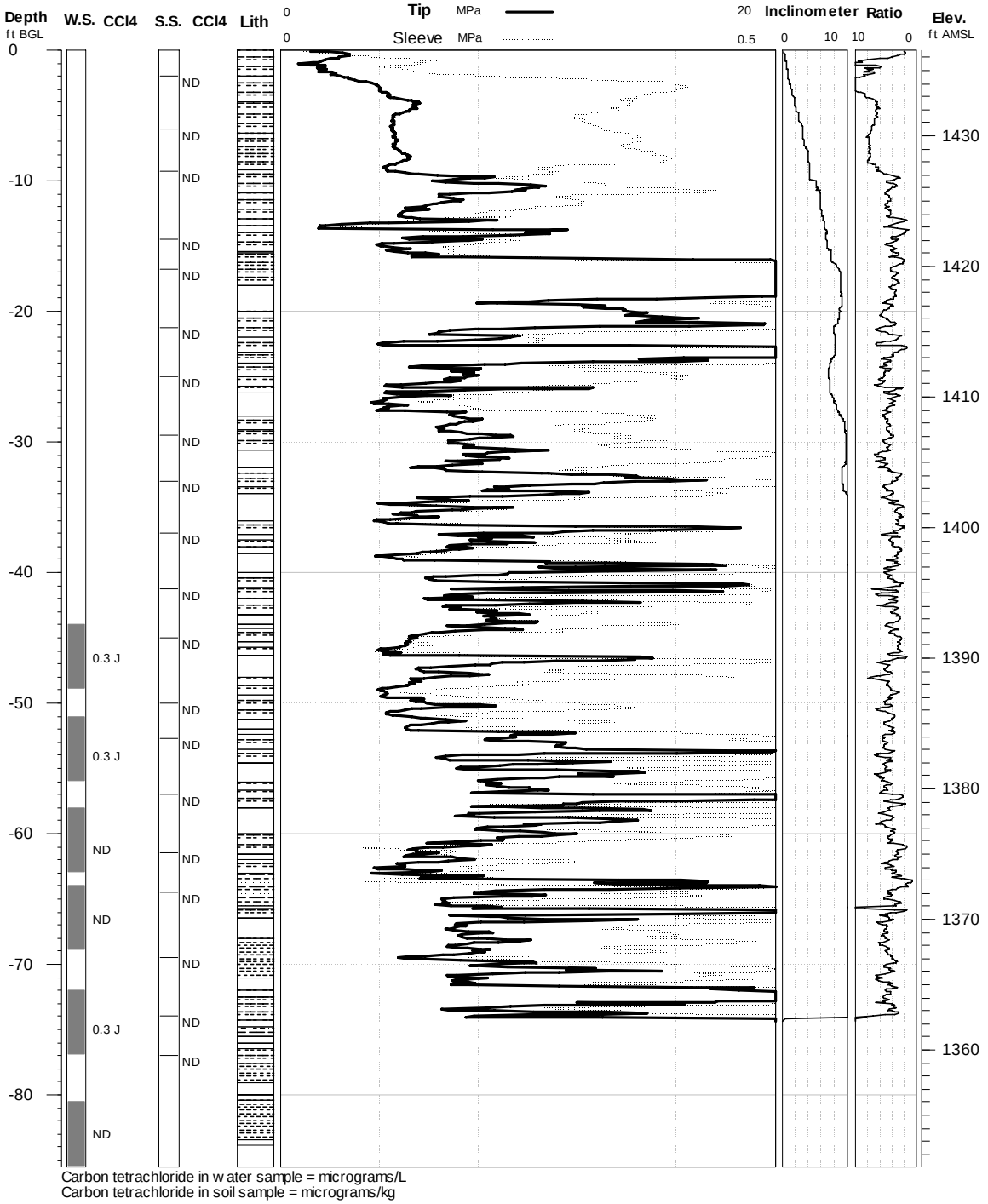
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-07

Project: Ramona, KS **Elevation:** 1436.572 ft.

Geologist: Lorraine LaFreniere **Depth:** 85.5 ft. BGL **Log Date:** 6/21/2006



Argonne National Laboratory

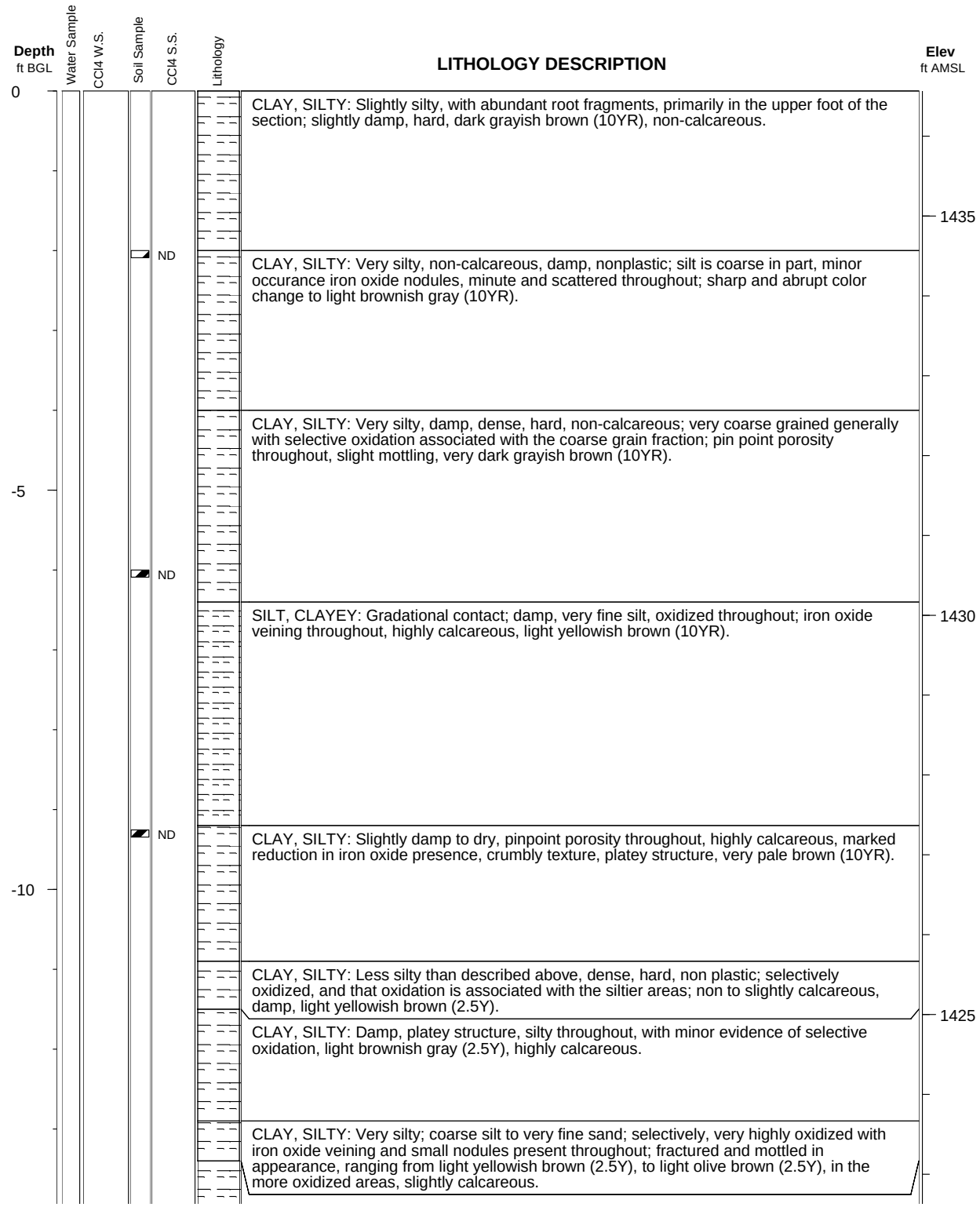
Boring ID: TI-07

Project: Ramona, KS

Elevation: 1436.572 ft.

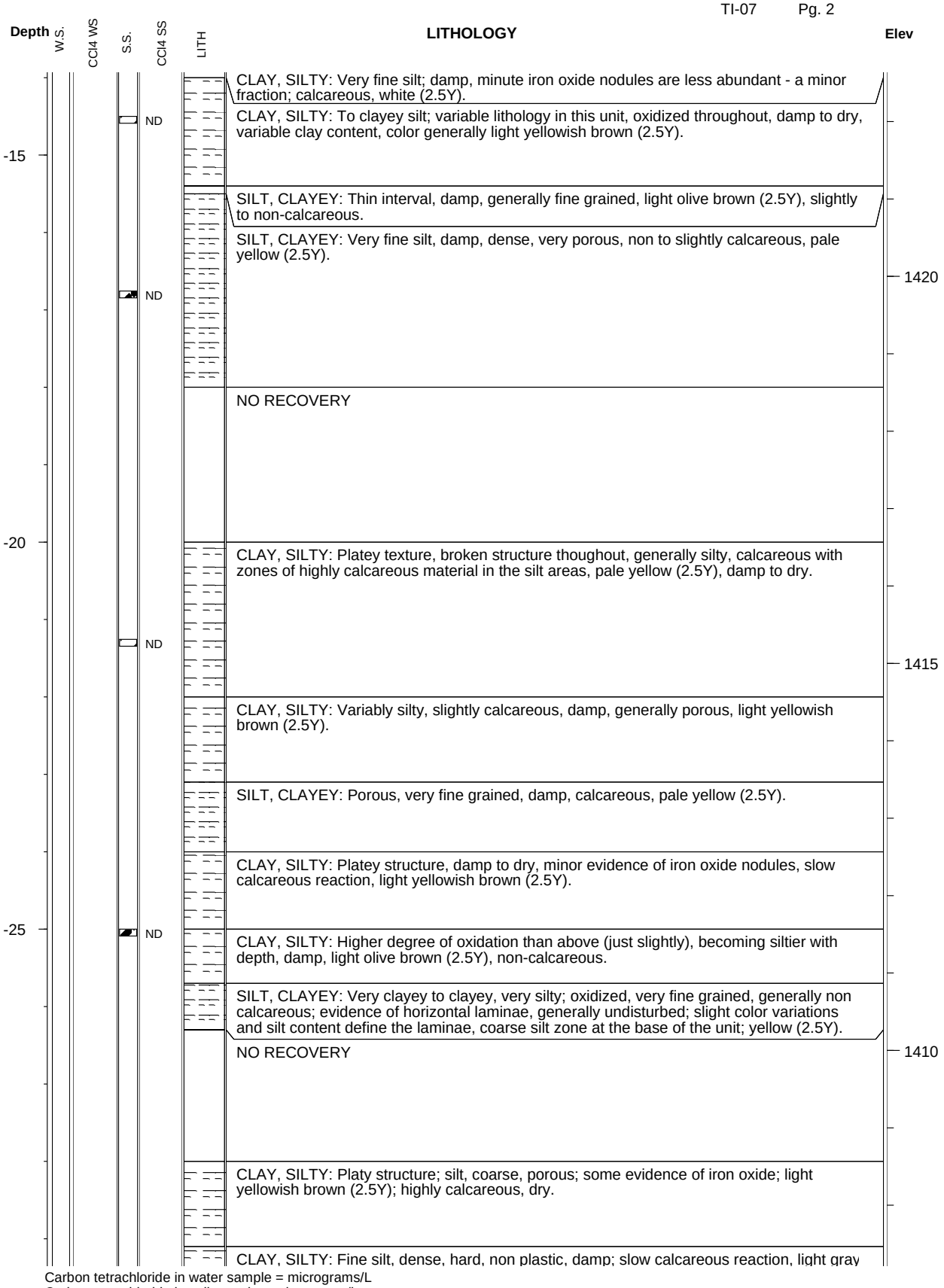
Geologist: Lorraine LaFreniere

Depth: 85.5 ft. BGL



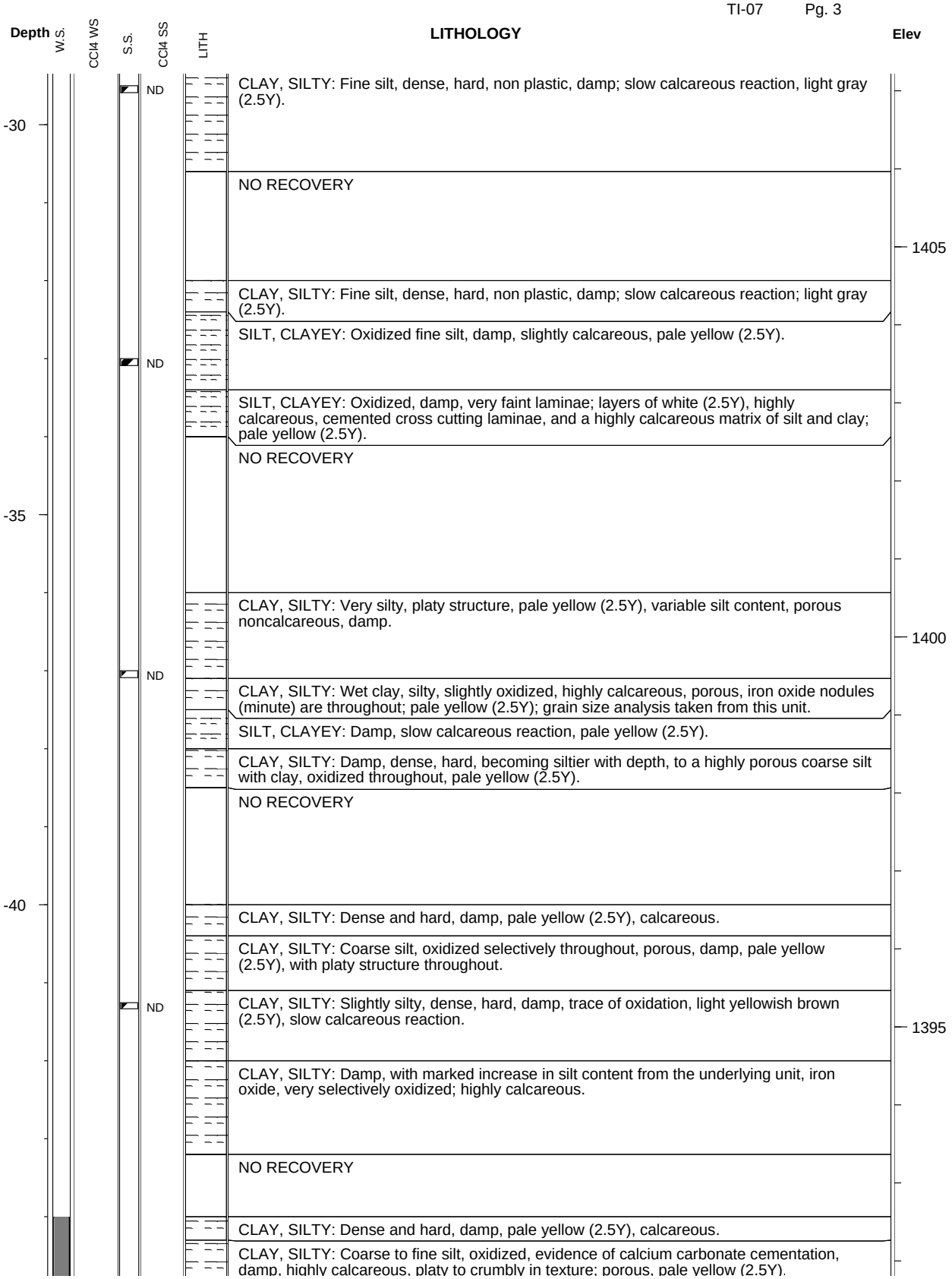
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-07 Pg. 2



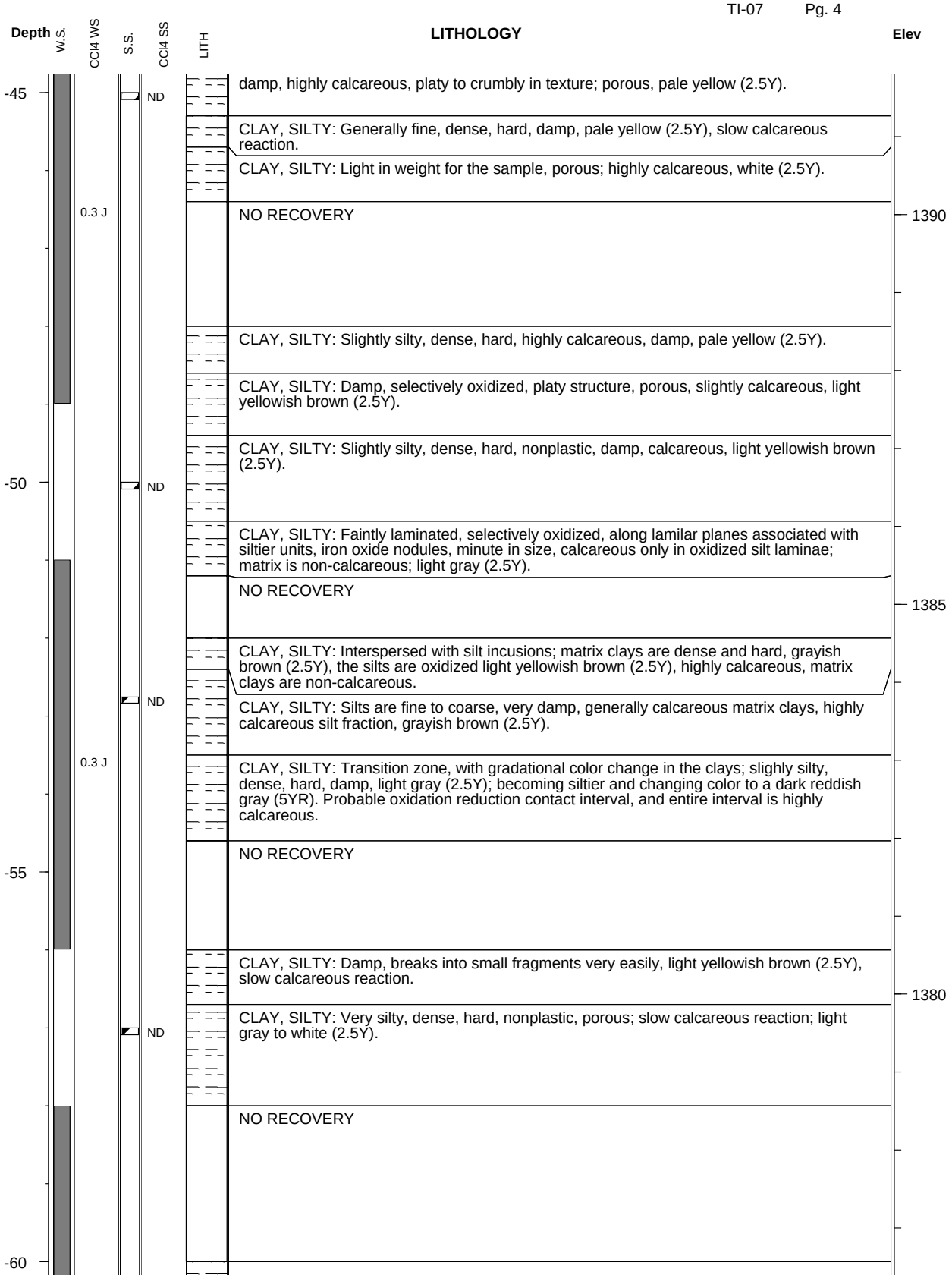
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-07 Pg. 3



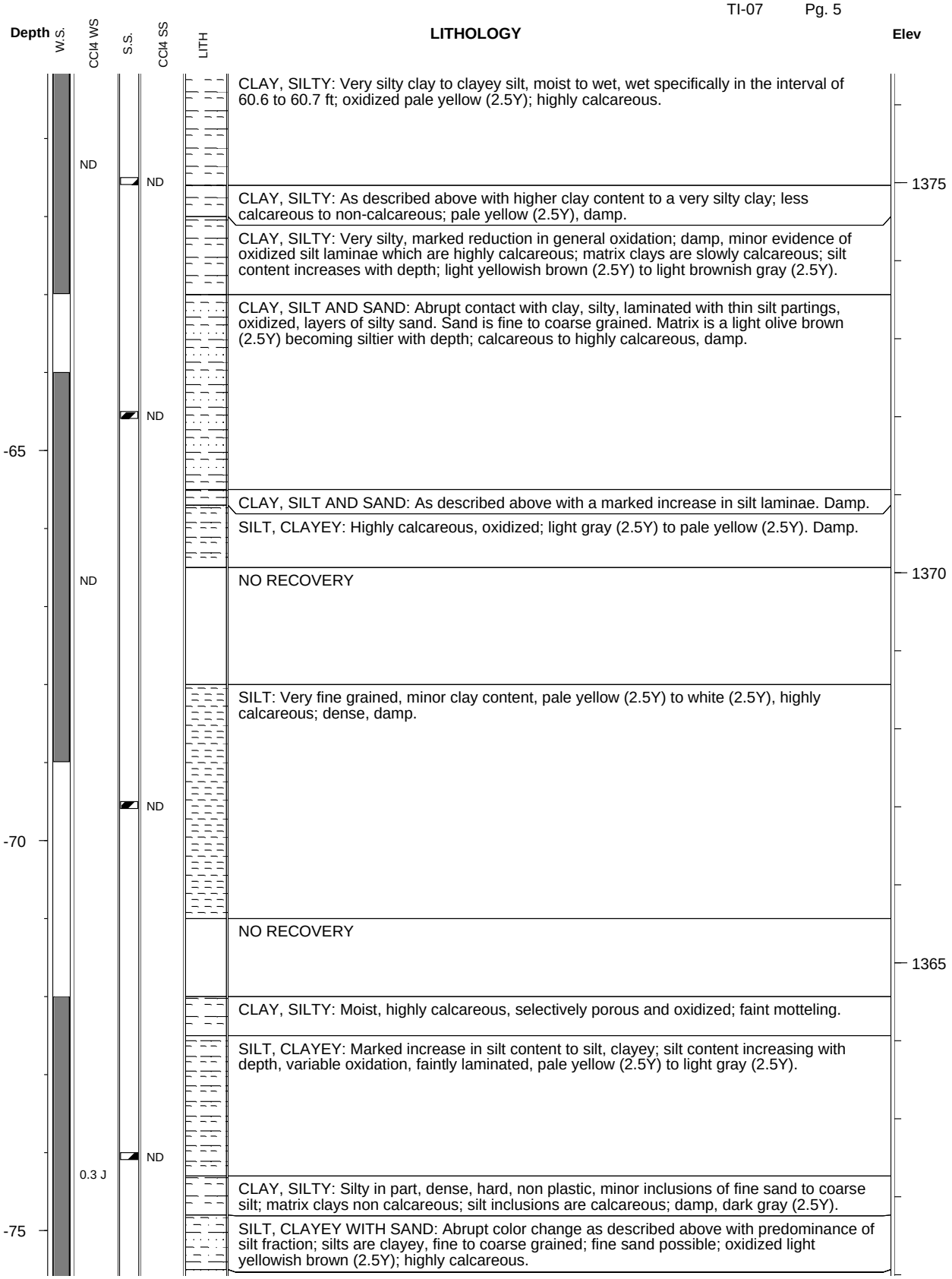
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-07 Pg. 4



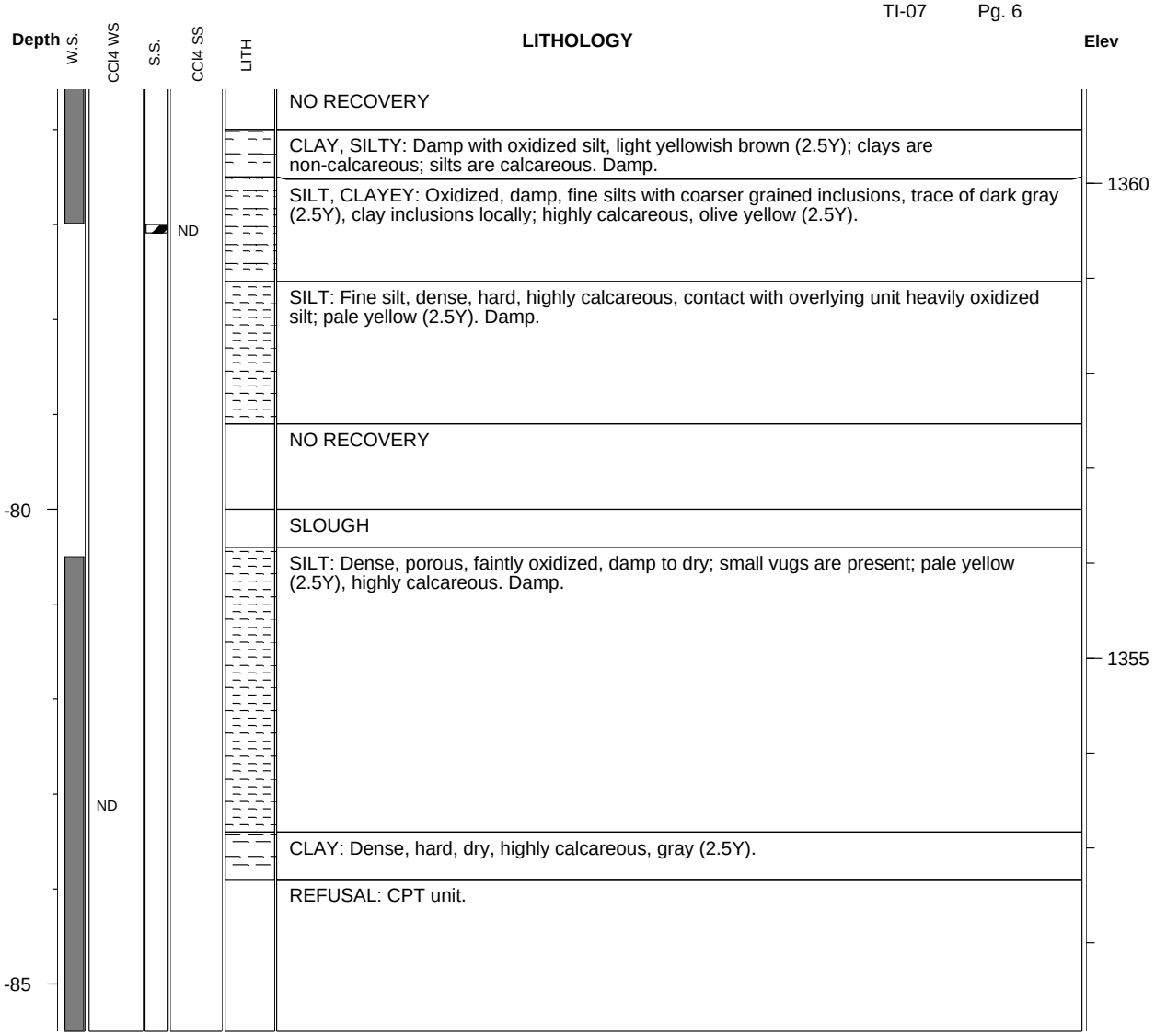
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-07 Pg. 5



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-07 Pg. 6

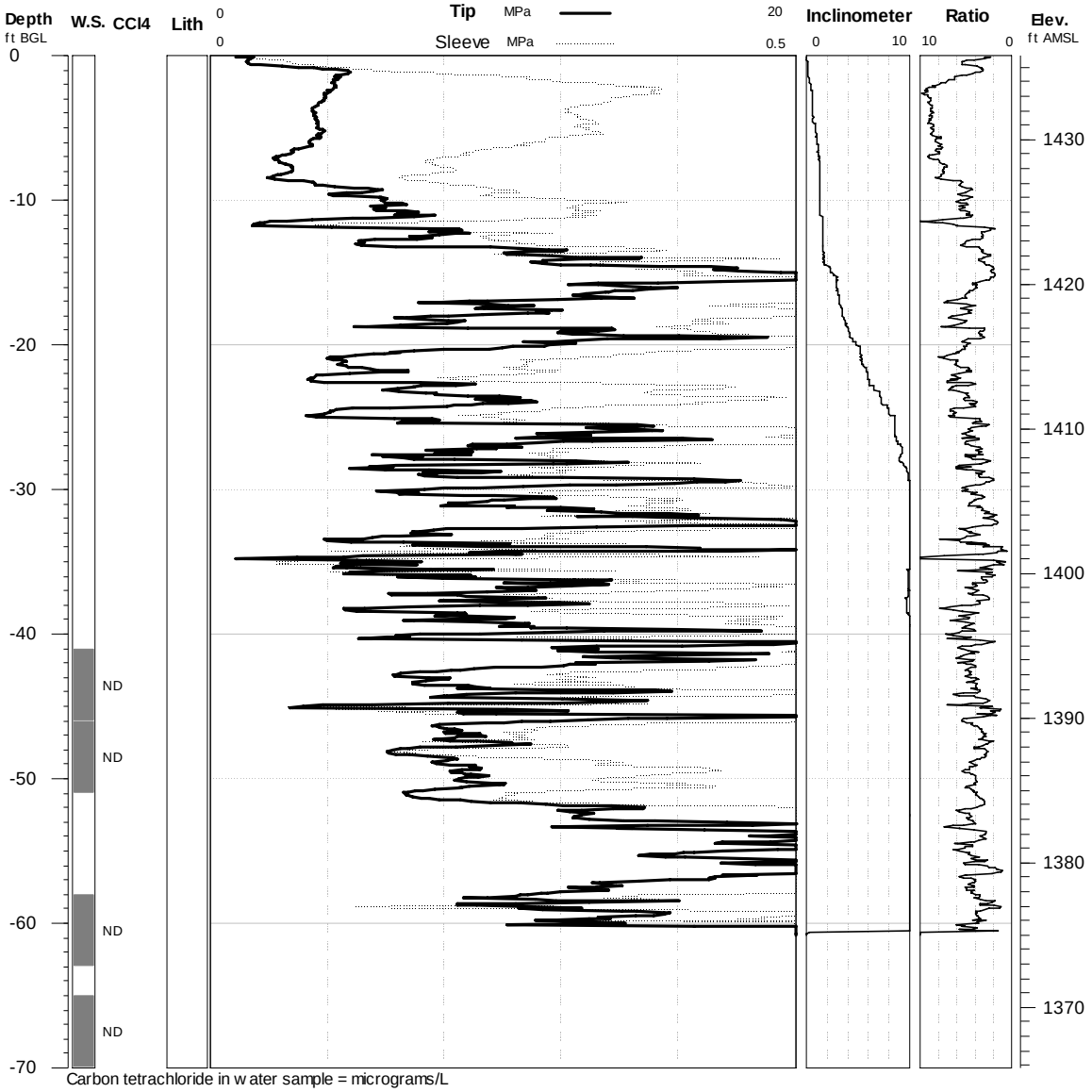


Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Project: Ramona, KS **Elevation:** 1435.819 ft. **Boring ID:** TI-08

Geologist: Lorraine LaFreniere **Depth:** 70 ft. BGL **Log Date:** 6/25/2006

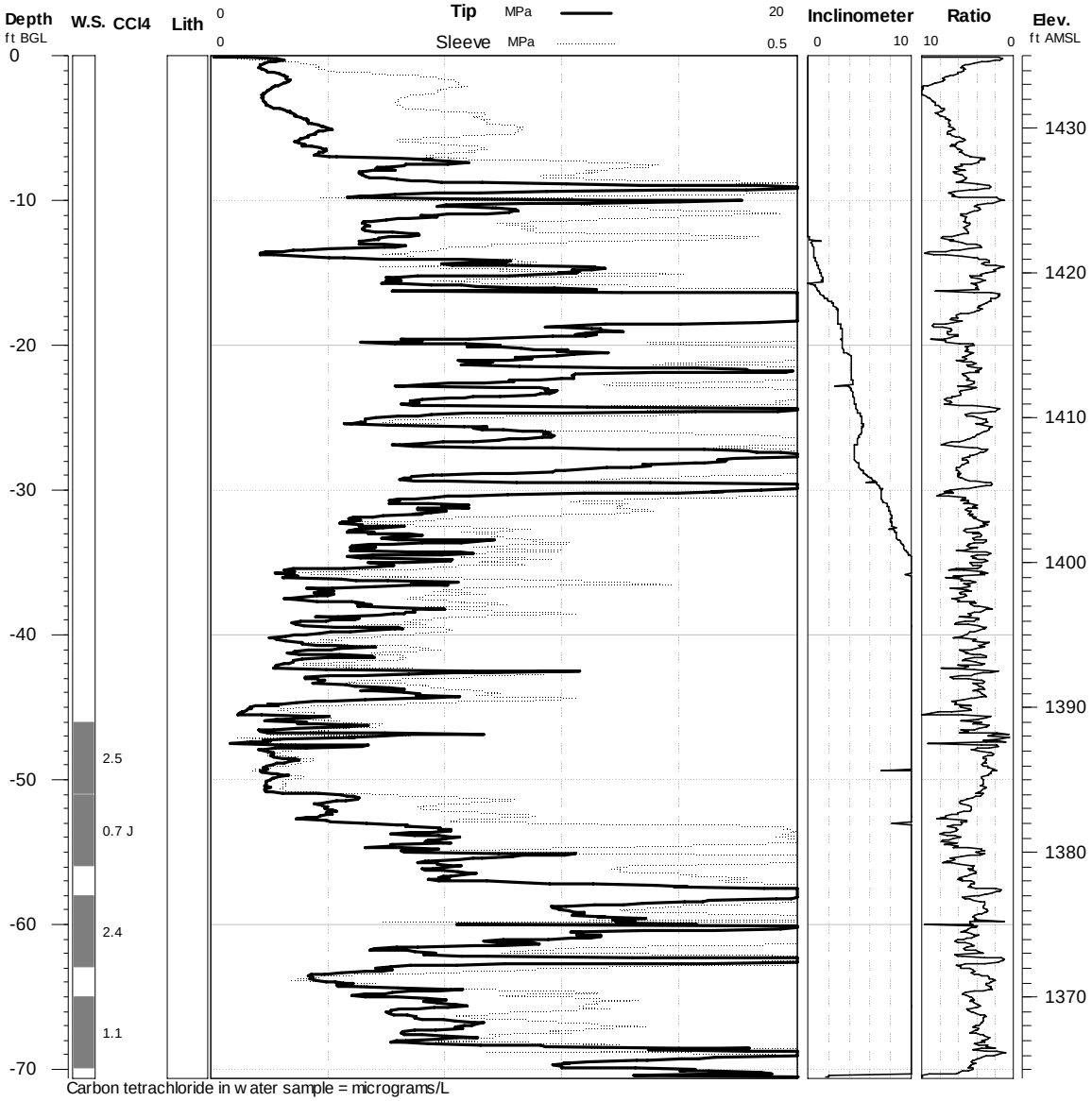


Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Project: Ramona, KS **Elevation:** 1435.011 ft. **Boring ID:** TI-09

Geologist: Lorraine LaFreniere **Depth:** 70.603 ft. BGL **Log Date:** 6/28/2006



Argonne National Laboratory

Boring ID: TI-10

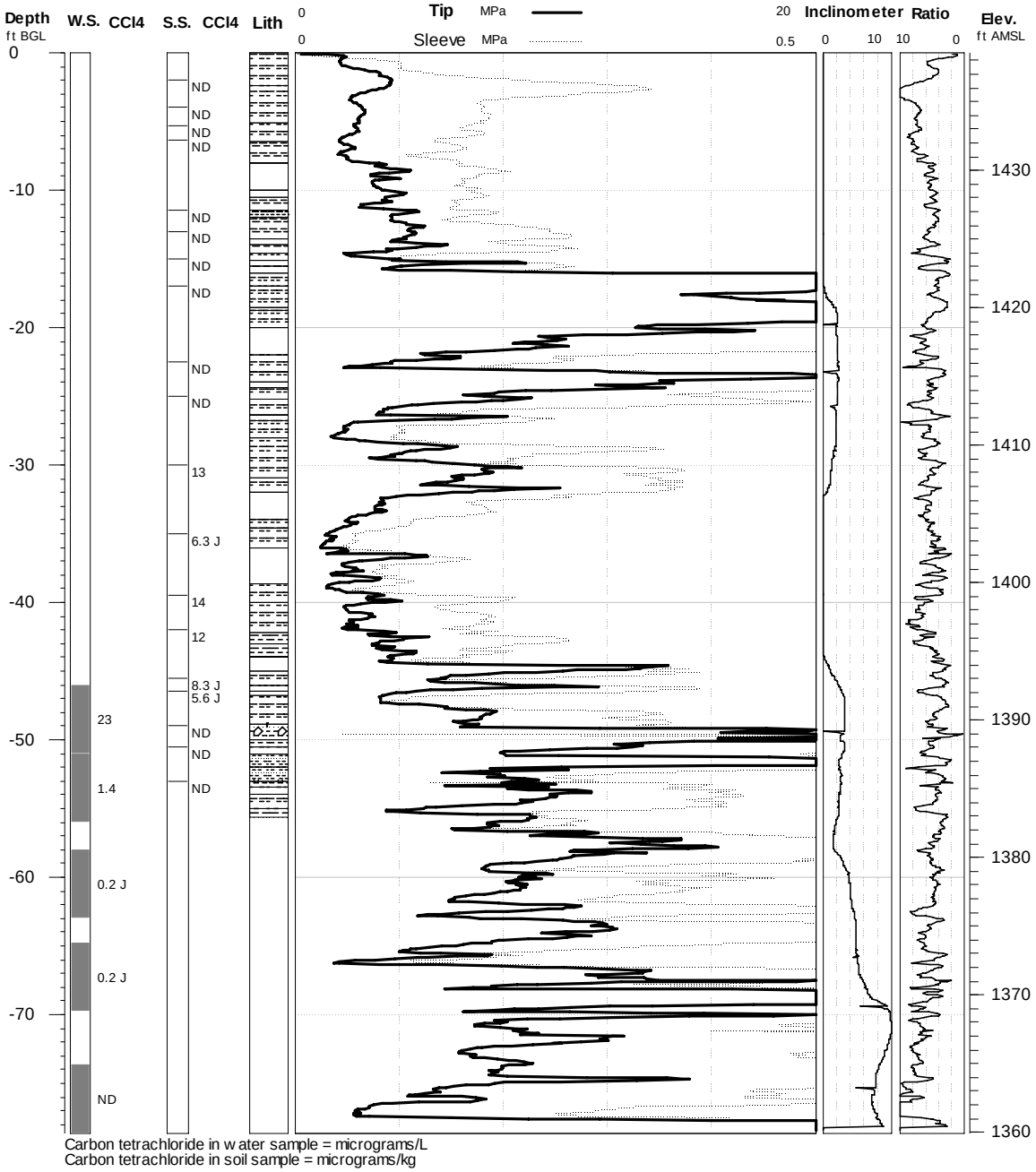
Project: Ramona, KS

Elevation: 1438.567 ft.

Geologist: Lorraine LaFreniere

Depth: 78.66 ft. BGL

Log Date: 6/26/2006



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

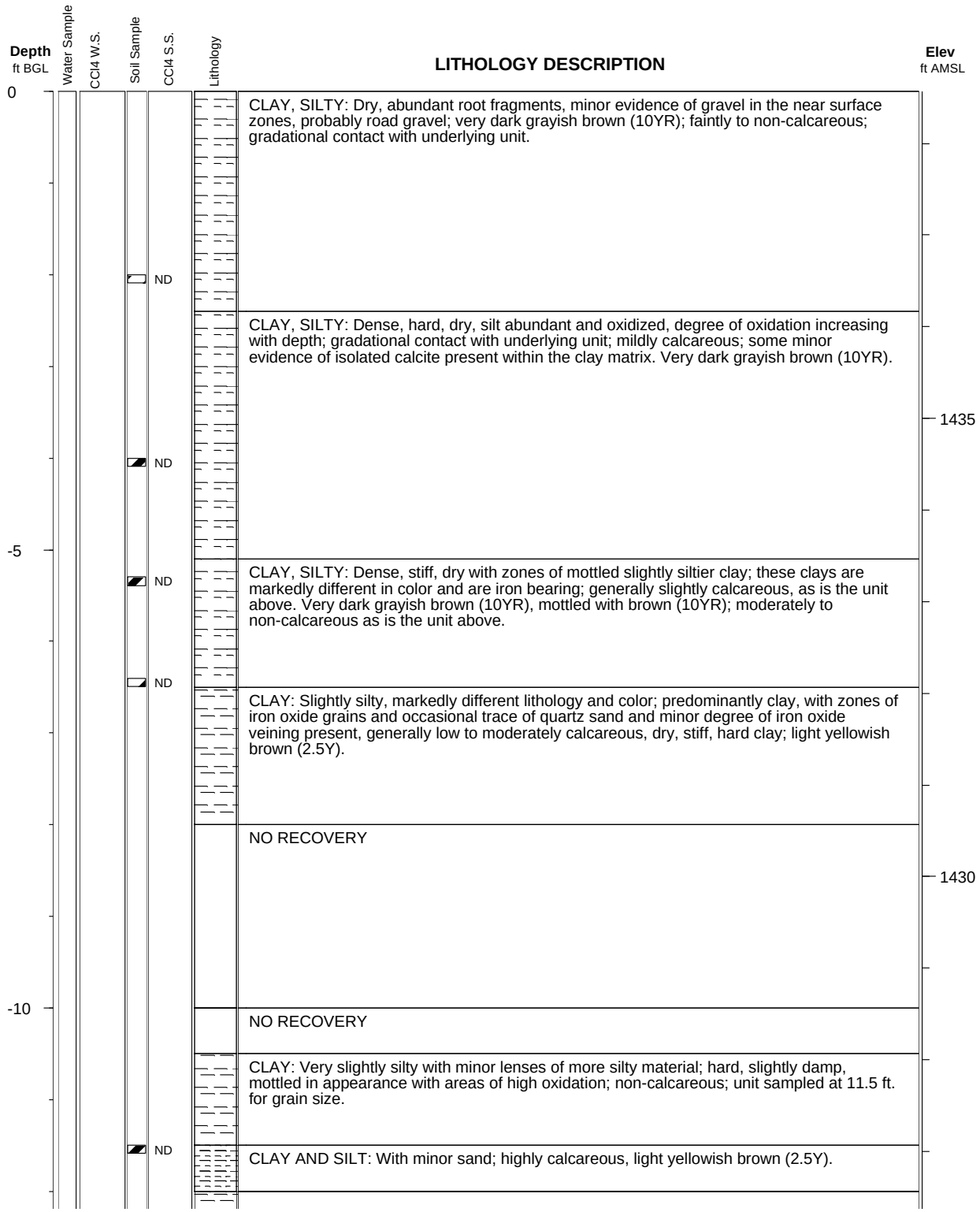
Boring ID: TI-10

Project: Ramona, KS

Elevation: 1438.567 ft.

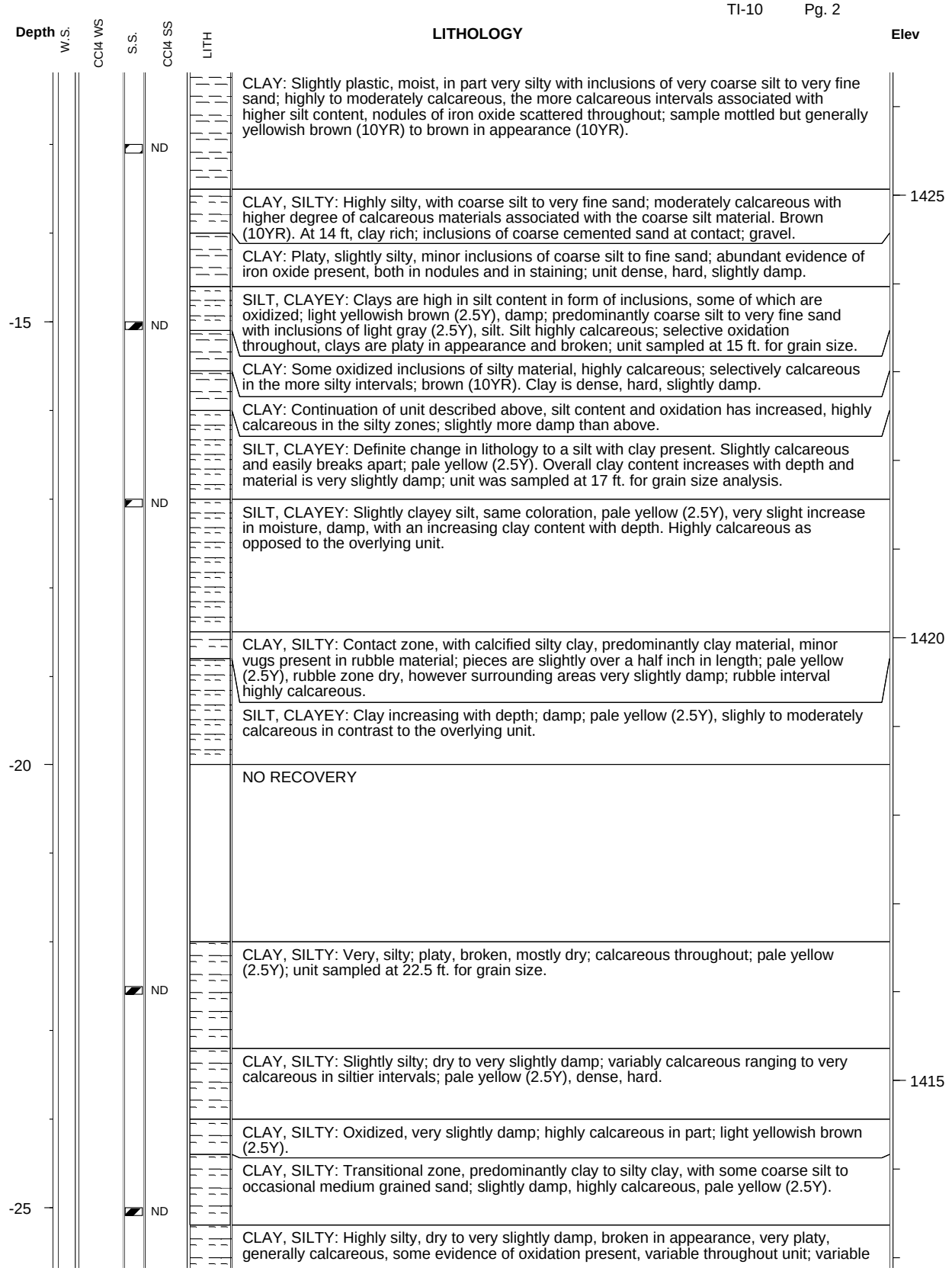
Geologist: Lorraine LaFreniere

Depth: 78.66 ft. BGL



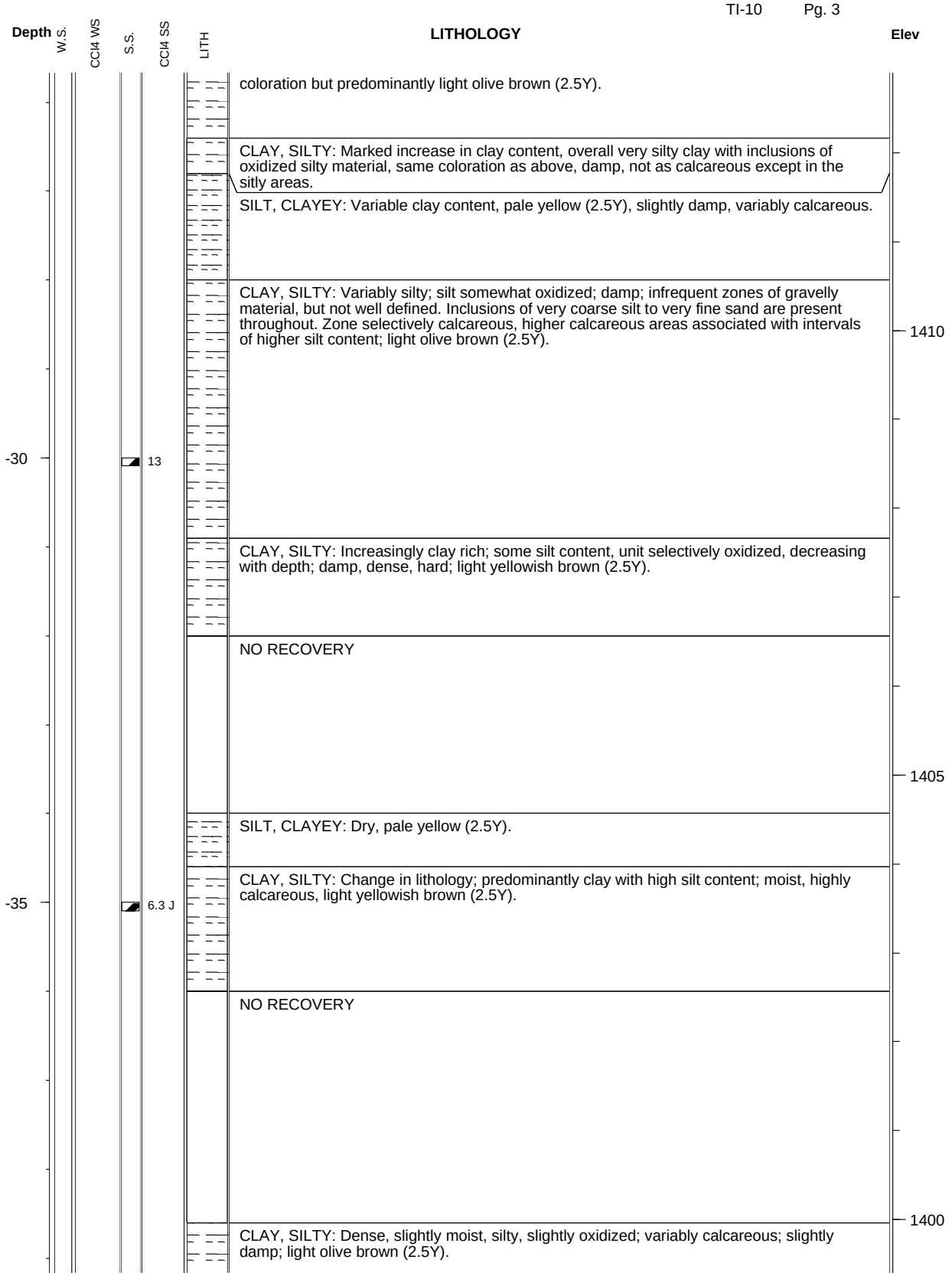
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-10 Pg. 2



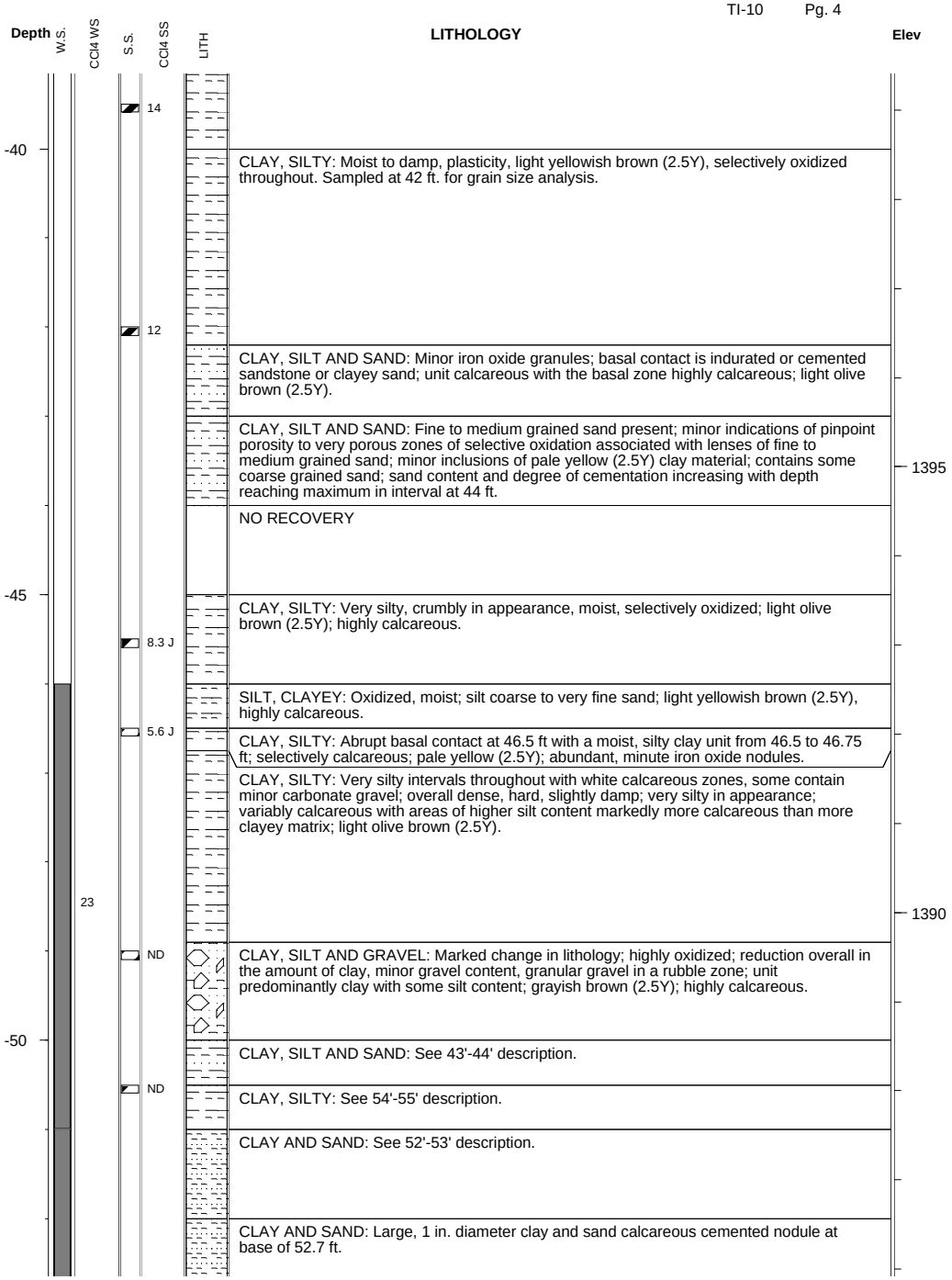
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-10 Pg. 3

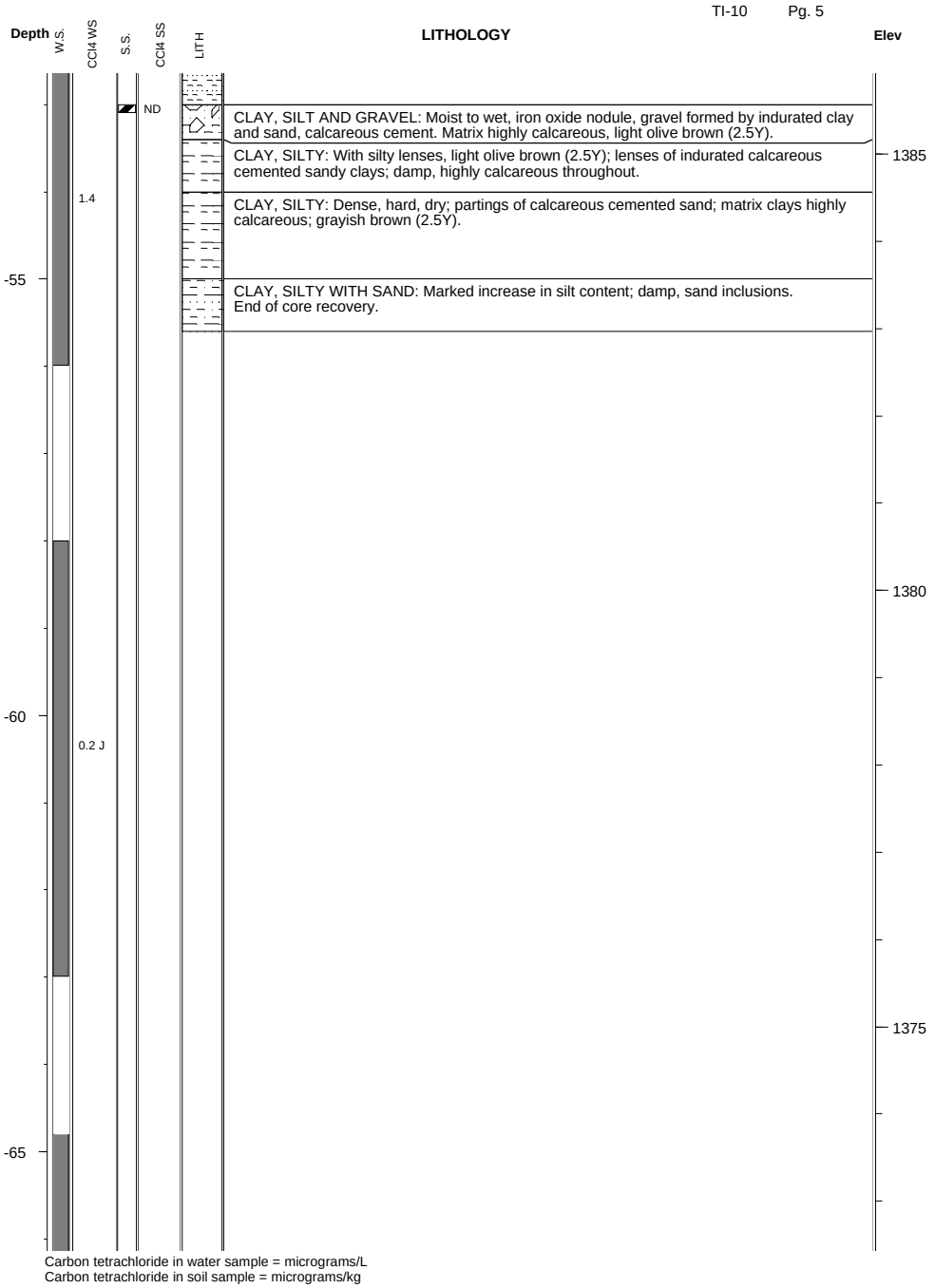


Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-10 Pg. 4



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Project: Ramona, KS

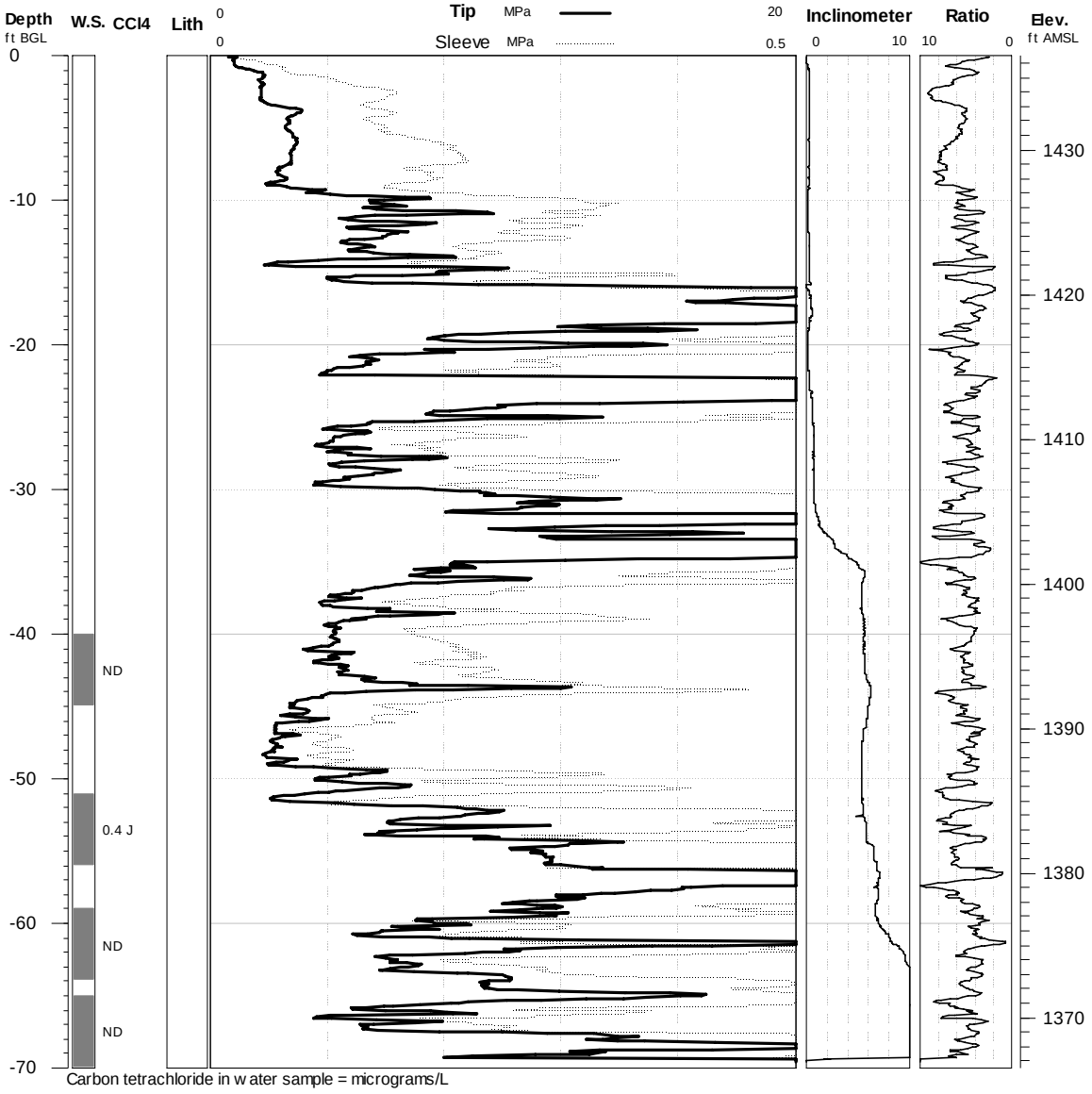
Elevation: 1436.521 ft.

Boring ID: TI-11

Geologist: Lorraine LaFreniere

Depth: 70 ft. BGL

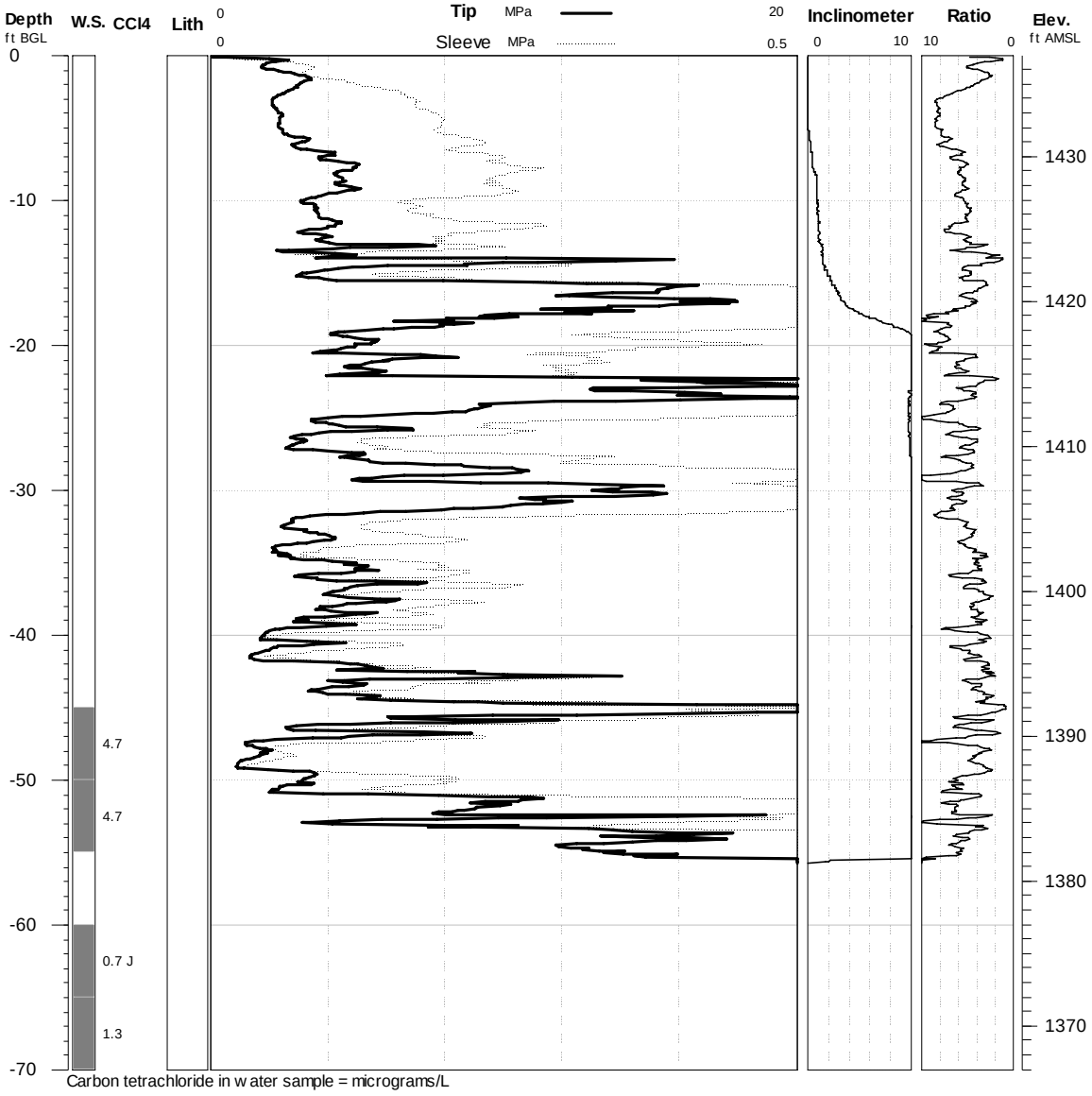
Log Date: 6/24/2006



Argonne National Laboratory

Project: Ramona, KS **Elevation:** 1436.955 ft. **Boring ID:** TI-12

Geologist: Lorraine LaFreniere **Depth:** 70 ft. BGL **Log Date:** 6/27/2006



Argonne National Laboratory

Project: Ramona, KS

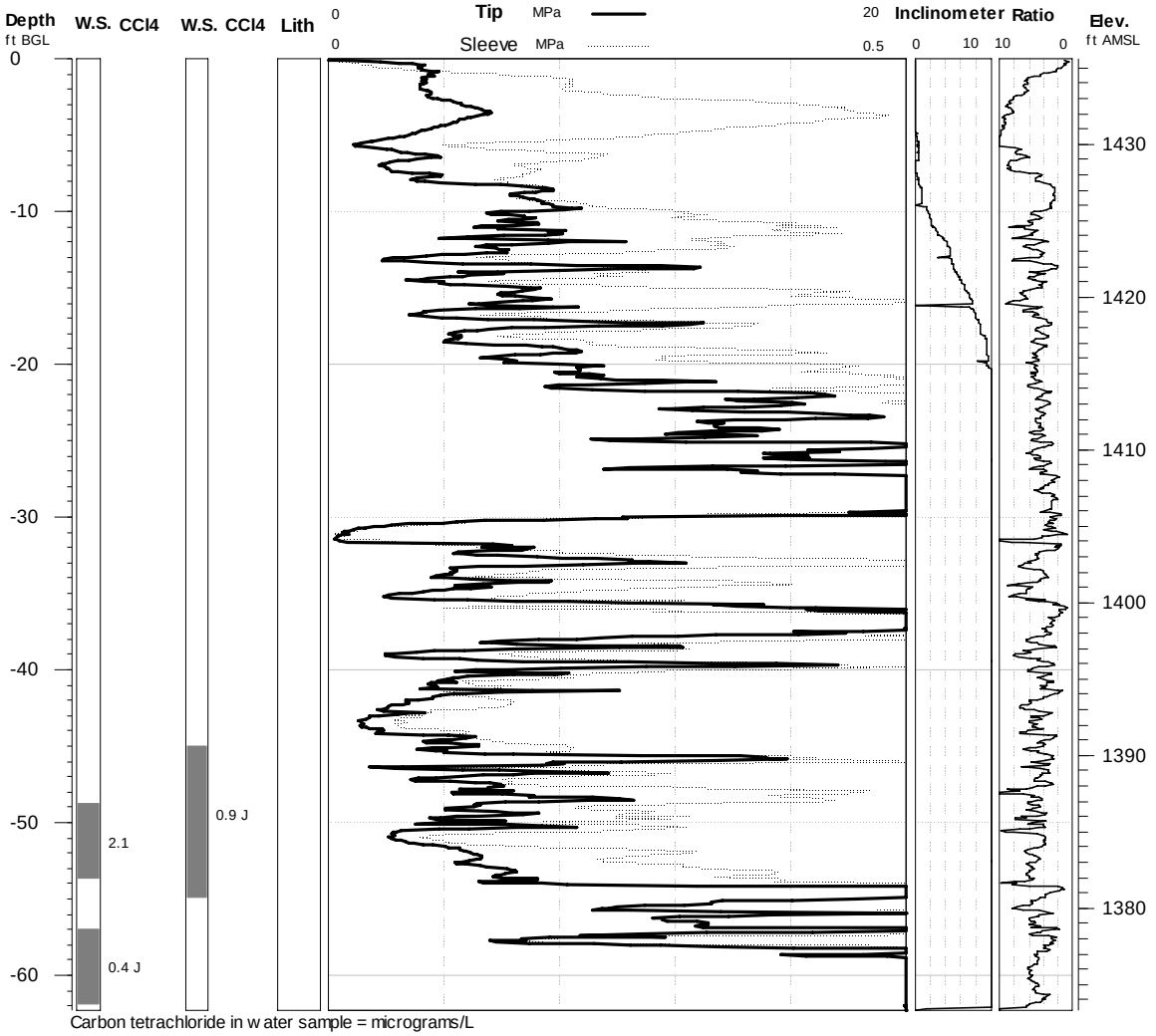
Boring ID: TI-17/MW05

Elevation: 1435.607 ft.

Geologist: Lorraine LaFreniere

Depth: 62.335 ft. BGL

Log Date: 7/6/2006



Appendix C:

Well Registration Forms and Construction Diagrams

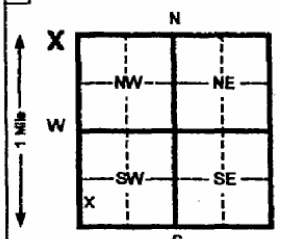
WATER WELL RECORD Form WWC-5 KSA 82a-1212 ID No. MW-04

1 LOCATION OF WATER WELL: County: Marion | Fraction: SW ¼ SW ¼ SW ¼ | Section Number: 1 | Township Number: T 17 S/N | Range Number: R 3 E/W

Distance and direction from nearest town or city street address of well if located within city?

2 WATER WELL OWNER: USDA/CCC
RR#, St. Address, Box # : Stop 0513, Room 4717-S/ 1400 Independence Ave SW
City, State, ZIP Code : Washington, DC 20250-0513
Board of Agriculture, Division of Water Resources Application Number:

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL 55.5 ft. ELEVATION: 1,440.093'
Depth(s) Groundwater Encountered 1 51 ft. 2 N/A ft. 3 N/A ft.
WELL'S STATIC WATER LEVEL 51 ft. below land surface measured on mo/day/yr 09/28/06
Pump test data: Well water was N/A ft. after N/A hours pumping N/A gpm
Est. Yield N/A gpm: Well water was N/A ft. after N/A hours pumping N/A gpm
Bore Hole Diameter 4.25 in. to 21 ft. and 3.25 Pilot in. to 55.5 ft.
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering (2) Other (Specify below)
2 Irrigation 4 Industrial 7 Lawn and garden (domestic) (10) Monitoring well Sand Point MW
Was a chemical/bacteriological sample submitted to Department? Yes ___ No X If yes, mo/day/yr sample was submitted N/A
Water Well Disinfected? Yes ___ No X

5 TYPE OF BLANK CASING USED: 1 Steel 3 RMP (SR) 5 Wrought Iron 8 Concrete tile 9 Other (specify below)
(2) PVC 4 ABS 6 Asbestos-Cement 7 Fiberglass
CASING JOINTS: Glued ___ Clamped ___ Welded ___ Threaded X
Blank casing diameter 1" in. to 45 ft., Dia N/A in. to N/A ft., Dia N/A in. to N/A ft.
Casing height above land surface Flush Mount in., weight Schedule 40 lbs./ft. Wall thickness or gauge No. .133"

TYPE OF SCREEN OR PERFORATION MATERIAL: 1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 10 Asbestos-cement
2 Brass 4 Galvanized steel 6 Concrete tile 9 ABS 11 Other (specify) 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE: 1 Continuous slot (3) Mill slot 5 Gauzed wrapped 8 Saw cut 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 9 Drilled holes
7 Torch cut 10 Other (specify)

SCREEN-PERFORATED INTERVALS: From 45 ft. to 55 ft. From ___ ft. to ___ ft.
From ___ ft. to ___ ft. From ___ ft. to ___ ft.
GRAVEL PACK INTERVALS: From 44 ft. to 55 ft. From ___ ft. to ___ ft.
From ___ ft. to ___ ft. From ___ ft. to ___ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bentonite 4 Other BenSeal Chips
Grout Intervals From 40 (#3) ft. to 0.5 ft. From 44 (#4) ft. to 40 ft. From N/A ft. to N/A ft.
What is the nearest source of possible contamination:
(1) Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/ Gas well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 16 Other (specify below)
13 Insecticide storage
Direction from well? How many feet? 200' East

FROM	TO	CODE	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2'		Top Soil			
2'	46'		Silt and Clay			
46'	47'		Silty Clay			
47'	48'		Silty Clay with some Sand			
48'	54'		Silty Clay and Sand			
54'	55.5'		Clay and Silt			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/yr) 09/27/06 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 680 This Water Well Record was completed on (mo/day/yr) 10-13-06
under the business name of Delta Environmental by (signature) [signature]

INSTRUCTIONS:. Please fill in blanks and circle the correct answers. Send three copies to Kansas Department of Health and Environment, Bureau of Water, 1000 S.W. Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.

Piezometer (Sand Point Well) MW04: Ramona, KS

SW 1/4 of SW 1/4 of SW 1/4 of Section 1, Twp. 17 South, Rge. 3 East
Marion County, State of Kansas

Date: 9/27/2006

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and a screened vent with a locking pipe plug and padlock.

CONCRETE PAD
Must be a minimum of 8" thick and extend at least 8" larger than the flush mount (28" minimum). Sloped to prevent pooling of water and vegetation around well and to allow for placement of a surveyor pin.

IMPERVIOUS GROUT
The well must be grouted with impervious grout and must be tremied in the hole, with clean fresh water, to have a minimum density of 9.4 lbs. per gallon. Grout must extend from the top of the bentonite chips to 3' BGL.

WELL CASING
Well casing shall terminate as high as possible inside the flush mount and be capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

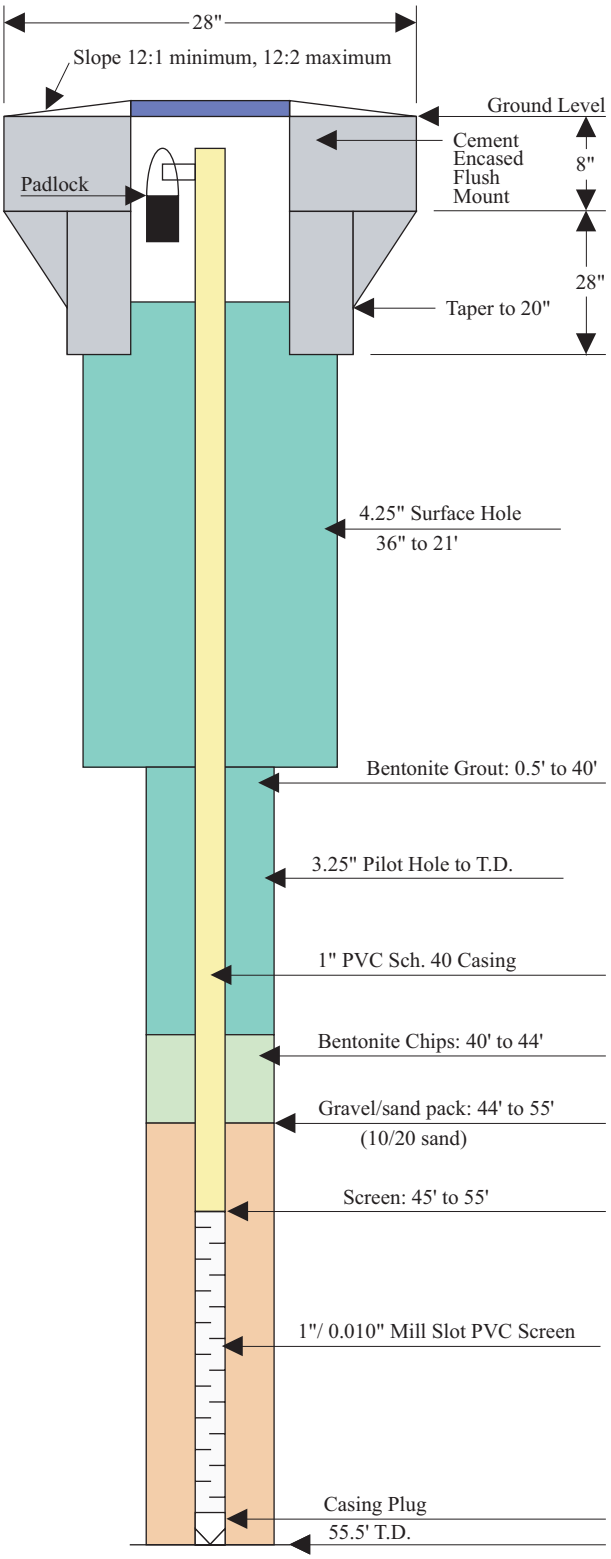
1" PVC Schedule 40 threaded casing and Mill Slot (0.010") well screen.

HOLE SIZE
The hole must be at least 4.25" in diameter for the top 21' and grouted to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack screen size and gradation shall be determined based upon the grain size and gradation of portion or portions of the aquifer to be screened. Gravel pack shall be designed to stabilize the aquifer material and permit the fine fraction to move into the well during development. Gravel/sand pack shall extend to at least 2' above screen.

CONTRACTOR LICENSING
All wells must be constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment.

REGISTRATION
All wells must be registered with the Kansas Department of Health and Environment on form WWC-5 provided by that Department.



(NOT TO SCALE)

MW-05

CORRECTION(S) TO WATER WELL RECORD (WWC-5)
(to rectify lacking or incorrect information)

County: Marion

Location listed as:	**Location changed to:**
Section-Township-Range: 2-17S-11E	2-17S-3E
Fraction (¼ ¼ ¼): SE SE SE	SE SE SE

Other changes: Initial statements: _____

Changed to: _____

Comments: _____

verification method: Other monitoring wells for same owner at same location on same date, and mapping tool on KGS website. initials: DRL date: 11/6/2006

submitted by: Kansas Geological Survey, Data Resources Library, 1930 Constant Ave., Lawrence, KS 66047-3726
to: Kansas Dept of Health & Environment, Bureau of Water, 1000 SW Jackson, Suite 420, Topeka, KS 66612-1367.

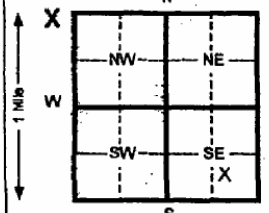
WATER WELL RECORD Form WWC-5 KSA 82a-1212 ID No. MW-05

1 LOCATION OF WATER WELL: County: Marion | Fraction: SE ¼ SE ¼ SE ¼ | Section Number: 2 | Township Number: T 17 N (S) | Range Number: R 11 (E) W

Distance and direction from nearest town or city street address of well if located within city?

2 WATER WELL OWNER: USDA/CCC
RR#, St. Address, Box # : Stop 0513, Room 4717-S/ 1400 Independence Ave SW
City, State, ZIP Code : Washington, DC 20250-0513
Board of Agriculture, Division of Water Resources Application Number:

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL 55.1 ft. ELEVATION: 1,435.607'
Depth(s) Groundwater Encountered 1 48 ft. 2 ft. 3 ft.
WELL'S STATIC WATER LEVEL 47.05 ft. below land surface measured on mo/day/yr 09/27/06
Pump test data: Well water was N/A ft. after N/A hours pumping N/A gpm
Est. Yield N/A gpm: Well water was N/A ft. after N/A hours pumping N/A gpm
Bore Hole Diameter 4.25 in. to 21 ft. and 3.5 in. to 55.1 ft.
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering (12) Other (Specify below)
2 Irrigation 4 Industrial 7 Lawn and garden (domestic) (10) Monitoring well Sand Point MW
Was a chemical/bacteriological sample submitted to Department? Yes ___ No X If yes, mo/day/yr sample was submitted N/A
Water Well Disinfected? Yes ___ No X

OFFICE USE ONLY

5 TYPE OF BLANK CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ___ Clamped ___
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded ___
(2) PVC 4 ABS 7 Fiberglass Threaded X
Blank casing diameter 1" in. to 45 ft., Dia N/A in. to N/A ft., Dia N/A in. to N/A ft.
Casing height above land surface Flush Mount in., weight Schedule 40 lbs./ft. Wall thickness or gauge No. .133"

TYPE OF SCREEN OR PERFORATION MATERIAL: (7) PVC 10 Asbestos-cement
1 Steel 3 Stainless steel 5 Fiberglass 8 RMP (SR) 11 Other (specify)
2 Brass 4 Galvanized steel 6 Concrete tile 9 ABS 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE: 5 Gauzed wrapped 8 Saw cut 11 None (open hole)
1 Continuous slot (3) Mill slot 6 Wire wrapped 9 Drilled holes
2 Louvered shutter 4 Key punched 7 Torch cut 10 Other (specify)
SCREEN-PERFORATED INTERVALS: From 45 ft. to 55 ft. From ___ ft. to ___ ft.
From ___ ft. to ___ ft. From ___ ft. to ___ ft.
GRAVEL PACK INTERVALS: From 44 ft. to 55 ft. From ___ ft. to ___ ft.
From ___ ft. to ___ ft. From ___ ft. to ___ ft.

T

R

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bentonite (4) Other BenSeal Chips
Grout Intervals From 40 (#3) ft. to 0.5 ft. From 44 (#4) ft. to 40 ft. From N/A ft. to N/A ft.
What is the nearest source of possible contamination:
(1) Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well
~~2 Sewer lines~~ 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/ Gas well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 16 Other (specify below)
13 Insecticide storage
Direction from well? How many feet? 800' East

FROM	TO	CODE	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2'		Top Soil			
2'	46'		Silt and Clay			
46'	49'		Silty Clay			
49'	50'		Silty Clay with some Sand			
50'	54'		Silty Clay and Sand			
54'	55.1'		Clay and Silt			

SEC

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/yr) 09/27/06 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 680 This Water Well Record was completed on (mo/day/yr) 10-12-06
under the business name of Delta Environmental by (signature)

INSTRUCTIONS:. Please fill in blanks and circle the correct answers. Send three copies to Kansas Department of Health and Environment, Bureau of Water, 1000 S W Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.

Form provided by Forms-On-A-Disk, Inc. - Dallas, Texas · (214) 340-8429

Piezometer (Sand Point Well) MW05: Ramona, KS

SE 1/4 of SE 1/4 of SE 1/4 of Section 2, Twp. 17 South, Rge. 3 East
Marion County, State of Kansas

Date: 9/27/2006

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and a screened vent with a locking pipe plug and padlock.

CONCRETE PAD
Must be a minimum of 8" thick and extend at least 8" larger than the flush mount (28" minimum). Sloped to prevent pooling of water and vegetation around well and to allow for placement of a surveyor pin.

IMPERVIOUS GROUT
The well must be grouted with impervious grout and must be tremied in the hole, with clean fresh water, to have a minimum density of 9.4 lbs. per gallon. Grout must extend from the top of the bentonite chips to 3' BGL.

WELL CASING
Well casing shall terminate as high as possible inside the flush mount and be capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

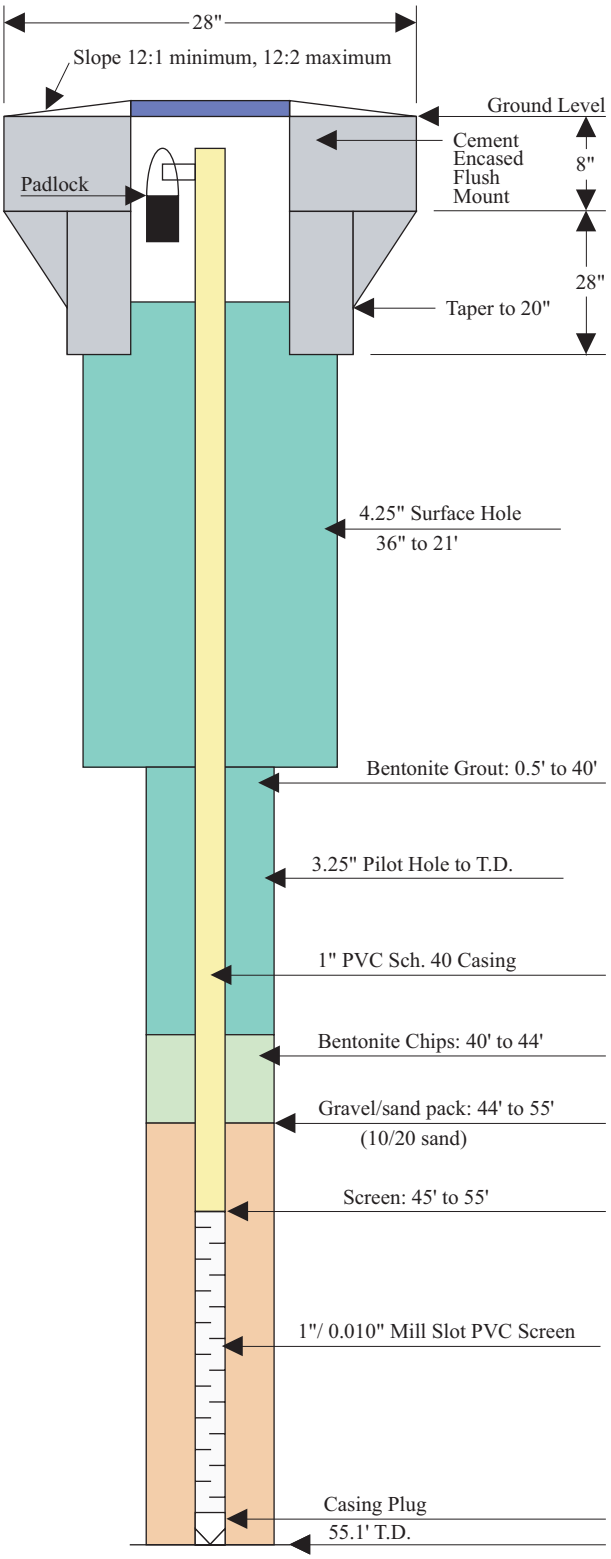
1" PVC Schedule 40 threaded casing and Mill Slot (0.010") well screen.

HOLE SIZE
The hole must be at least 4.25" in diameter for the top 21' and grouted to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack screen size and gradation shall be determined based upon the grain size and gradation of portion or portions of the aquifer to be screened. Gravel pack shall be designed to stabilize the aquifer material and permit the fine fraction to move into the well during development. Gravel/sand pack shall extend to at least 2' above screen.

CONTRACTOR LICENSING
All wells must be constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment.

REGISTRATION
All wells must be registered with the Kansas Department of Health and Environment on form WWC-5 provided by that Department.



(NOT TO SCALE)

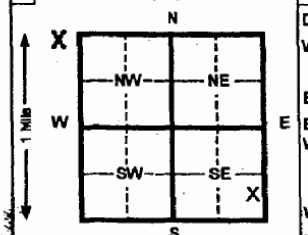
WATER WELL RECORD Form WWC-5 KSA 82a-1212 ID No. MW-06

1 LOCATION OF WATER WELL: County: Marion | Fraction: SE ¼ SE ¼ SE ¼ | Section Number: 2 | Township Number: T 17 N/S | Range Number: R 3 E/W

Distance and direction from nearest town or city street address of well if located within city?

2 WATER WELL OWNER: USDA/CCC
RR#, St. Address, Box # : Stop 0513, Room 4717-S/ 1400 Independence Ave SW
City, State, ZIP Code : Washington, DC 20250-0513
Board of Agriculture, Division of Water Resources Application Number:

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL 55.6 ft. ELEVATION: 1,436.955'
Depth(s) Groundwater Encountered 1 50 ft. 2 ft. 3 ft.
WELL'S STATIC WATER LEVEL 49.08 ft. below land surface measured on mo/day/yr 10/12/06
Pump test data: Well water was N/A ft. after N/A hours pumping N/A gpm
Est. Yield N/A gpm: Well water was N/A ft. after N/A hours pumping N/A gpm
Bore Hole Diameter 4.25 in. to 21 ft. and 3.5 in. to 55.6 ft.
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering (12) Other (Specify below)
2 Irrigation 4 Industrial 7 Lawn and garden (domestic) (10) Monitoring well Sand Point MW
Was a chemical/bacteriological sample submitted to Department? Yes No X If yes, mo/day/yr sample was submitted N/A
Water Well Disinfected? Yes No X

5 TYPE OF BLANK CASING USED: 1 Steel 3 RMP (SR) 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued Clamped
(2) PVC 4 ABS 6 Asbestos-Cement 9 Other (specify below) Welded
7 Fiberglass Threaded X
Blank casing diameter 1" in. to 45 ft., Dia N/A in. to N/A ft., Dia N/A in. to N/A ft.
Casing height above land surface Flush Mount in., weight Schedule 40 lbs./ft. Wall thickness or gauge No. .133"

TYPE OF SCREEN OR PERFORATION MATERIAL: (7) PVC 10 Asbestos-cement
1 Steel 3 Stainless steel 5 Fiberglass 8 RMP (SR) 11 Other (specify)
2 Brass 4 Galvanized steel 6 Concrete tile 9 ABS 12 None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE: 5 Gauzed wrapped 8 Saw cut 11 None (open hole)
1 Continuous slot (3) Mill slot 6 Wire wrapped 9 Drilled holes
2 Louvered shutter 4 Key punched 7 Torch cut 10 Other (specify)

SCREEN-PERFORATED INTERVALS: From 45 ft. to 55 ft. From ft. to ft.
From ft. to ft. From ft. to ft.
GRAVEL PACK INTERVALS: From 44 ft. to 55 ft. From ft. to ft.
From ft. to ft. From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bentonite 4 Other BenSeal Chips
Grout Intervals From 40 (#3) ft. to 0.5 ft. From 44 (#4) ft. to 40 ft. From N/A ft. to N/A ft.

What is the nearest source of possible contamination:
(1) Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well
2 ~~Sewer lines~~ 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/ Gas well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 16 Other (specify below)
13 Insecticide storage
Direction from well? How many feet? 400' East

FROM	TO	CODE	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2'		Top Soil			
2'	48'		Silt and Clay			
48'	49'		Silty Clay			
49'	50'		Silty Clay with some Sand			
50'	55'		Silty Clay and Sand			
55'	55.6'		Clay and Silt			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/yr) 09/27/06 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 680 This Water Well Record was completed on (mo/day/yr) 10-13-06
under the business name of Delta Environmental by (signature)

INSTRUCTIONS:. Please fill in blanks and circle the correct answers. Send three copies to Kansas Department of Health and Environment, Bureau of Water, 1000 S W Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.

Piezometer (Sand Point Well) MW06: Ramona, KS

SE 1/4 of SE 1/4 of SE 1/4 of Section 2, Twp. 17 South, Rge. 3 East
Marion County, State of Kansas

Date: 9/27/2006

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and a screened vent with a locking pipe plug and padlock.

CONCRETE PAD
Must be a minimum of 8" thick and extend at least 8" larger than the flush mount (28" minimum). Sloped to prevent pooling of water and vegetation around well and to allow for placement of a surveyor pin.

IMPERVIOUS GROUT
The well must be grouted with impervious grout and must be tremied in the hole, with clean fresh water, to have a minimum density of 9.4 lbs. per gallon. Grout must extend from the top of the bentonite chips to 3' BGL.

WELL CASING
Well casing shall terminate as high as possible inside the flush mount and be capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

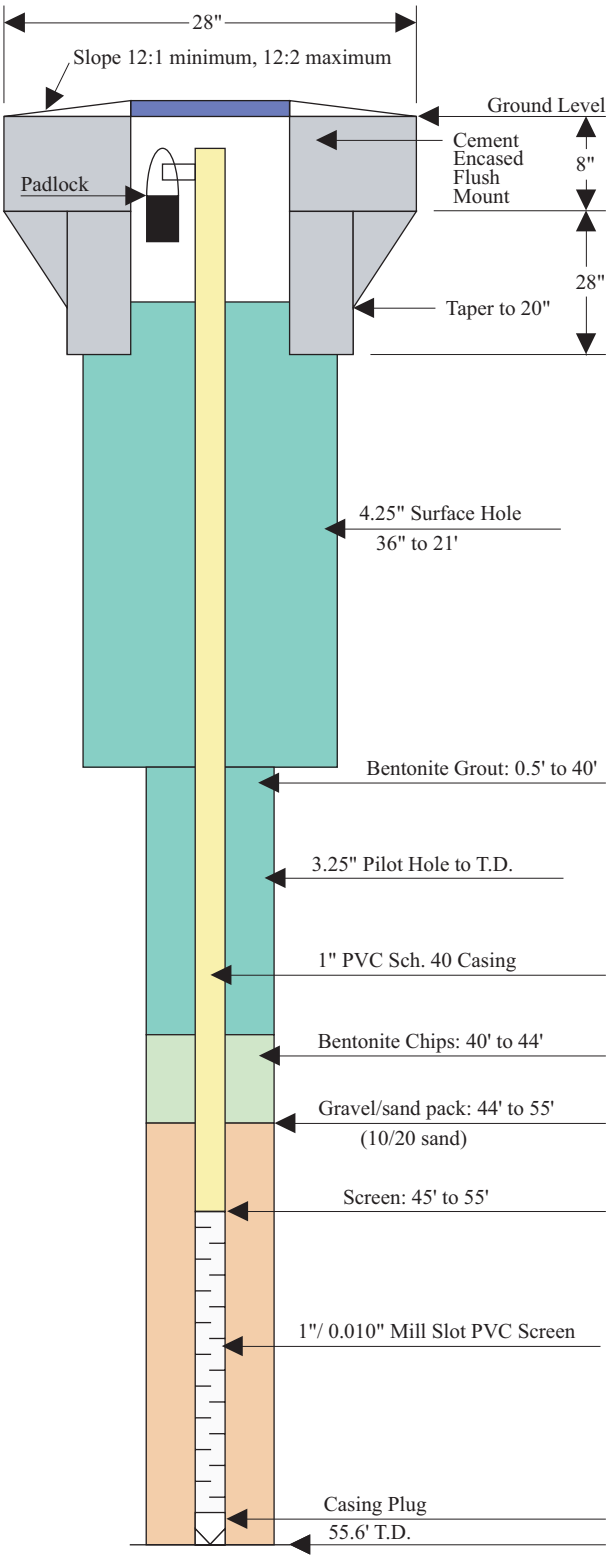
1" PVC Schedule 40 threaded casing and Mill Slot (0.010") well screen.

HOLE SIZE
The hole must be at least 4.25" in diameter for the top 21' and grouted to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack screen size and gradation shall be determined based upon the grain size and gradation of portion or portions of the aquifer to be screened. Gravel pack shall be designed to stabilize the aquifer material and permit the fine fraction to move into the well during development. Gravel/sand pack shall extend to at least 2' above screen.

CONTRACTOR LICENSING
All wells must be constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment.

REGISTRATION
All wells must be registered with the Kansas Department of Health and Environment on form WWC-5 provided by that Department.



(NOT TO SCALE)

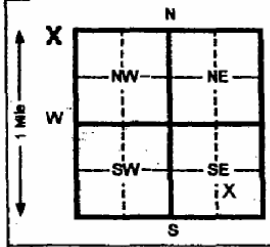
WATER WELL RECORD Form WWC-5 KSA 82a-1212 ID No. **MW-07**

1 LOCATION OF WATER WELL: County: **Marion** | Fraction: **SE ¼ SE ¼ SE ¼** | Section Number: **2** | Township Number: T **17** N (S) | Range Number: R **3** (E) W

Distance and direction from nearest town or city street address of well if located within city?

2 WATER WELL OWNER: **USDA/CCC**
RR#, St. Address, Box # : **Stop 0513, Room 4717-S/ 1400 Independence Ave SW**
City, State, ZIP Code : **Washington, DC 20250-0513**
Board of Agriculture, Division of Water Resources Application Number:

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL **55.7** ft. ELEVATION: **1,438.61'**
Depth(s) Groundwater Encountered 1 **48** ft. 2 ____ ft. 3 ____ ft.
WELL'S STATIC WATER LEVEL **49.08** ft. below land surface measured on mo/day/yr **10/12/06**
Pump test data: Well water was **N/A** ft. after **N/A** hours pumping **N/A** gpm
Est. Yield **N/A** gpm: Well water was **N/A** ft. after **N/A** hours pumping **N/A** gpm
Bore Hole Diameter **4.25** in. to **21** ft. and **3.5** in. to **55.7** ft.
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering (12) Other (Specify below)
2 Irrigation 4 Industrial 7 Lawn and garden (domestic) (10) Monitoring well **Sand Point MW**
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** If yes, mo/day/yr sample was submitted **N/A**
Water Well Disinfected? Yes ____ No **X**

5 TYPE OF BLANK CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ____ Clamped ____
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded ____
(2) PVC 4 ABS 7 Fiberglass Threaded **X**
Blank casing diameter **1"** in. to **45** ft., Dia **N/A** in. to **N/A** ft., Dia **N/A** in. to **N/A** ft.
Casing height above land surface **Flush Mount** in., weight **Schedule 40** lbs./ft. Wall thickness or gauge No. **.133"**
TYPE OF SCREEN OR PERFORATION MATERIAL: (7) PVC 10 Asbestos-cement
1 Steel 3 Stainless steel 5 Fiberglass 8 RMP (SR) 11 Other (specify) ____
2 Brass 4 Galvanized steel 6 Concrete tile 9 ABS 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE: 5 Gauzed wrapped 8 Saw cut 11 None (open hole)
1 Continuous slot (3) Mill slot 6 Wire wrapped 9 Drilled holes
2 Louvered shutter 4 Key punched 7 Torch cut 10 Other (specify) ____
SCREEN-PERFORATED INTERVALS: From **45** ft. to **55** ft. From ____ ft. to ____ ft.
From ____ ft. to ____ ft. From ____ ft. to ____ ft.
GRAVEL PACK INTERVALS: From **44** ft. to **55** ft. From ____ ft. to ____ ft.
From ____ ft. to ____ ft. From ____ ft. to ____ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3 Bentonite) (4 Other **BenSeal Chips**)
Grout Intervals From **40 (#3)** ft. to **0.5** ft. From **44 (#4)** ft. to **40** ft. From **N/A** ft. to **N/A** ft.
What is the nearest source of possible contamination:
(1) Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well
~~2 Sewer lines~~ 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/ Gas well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 16 Other (specify below)
13 Insecticide storage
Direction from well? How many feet? **600' East**

FROM	TO	CODE	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2'		Top Soil			
2'	46'		Silt and Clay			
46'	49'		Silty Clay			
49'	50'		Silty Clay with some Sand			
50'	54'		Silty Clay and Sand			
54'	55.7'		Clay and Silt			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/yr) **09/27/06** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **680** This Water Well Record was completed on (mo/day/yr) **10-13-06**
under the business name of **Delta Environmental** by (signature) ____

INSTRUCTIONS:. Please fill in blanks and circle the correct answers. Send three copies to Kansas Department of Health and Environment, Bureau of Water, 1000 S W Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.

Piezometer (Sand Point Well) MW07: Ramona, KS

SE 1/4 of SE 1/4 of SE 1/4 of Section 2, Twp. 17 South, Rge. 3 East
Marion County, State of Kansas

Date: 9/27/2006

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and a screened vent with a locking pipe plug and padlock.

CONCRETE PAD
Must be a minimum of 8" thick and extend at least 8" larger than the flush mount (28" minimum). Sloped to prevent pooling of water and vegetation around well and to allow for placement of a surveyor pin.

IMPERVIOUS GROUT
The well must be grouted with impervious grout and must be tremied in the hole, with clean fresh water, to have a minimum density of 9.4 lbs. per gallon. Grout must extend from the top of the bentonite chips to 3' BGL.

WELL CASING
Well casing shall terminate as high as possible inside the flush mount and be capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

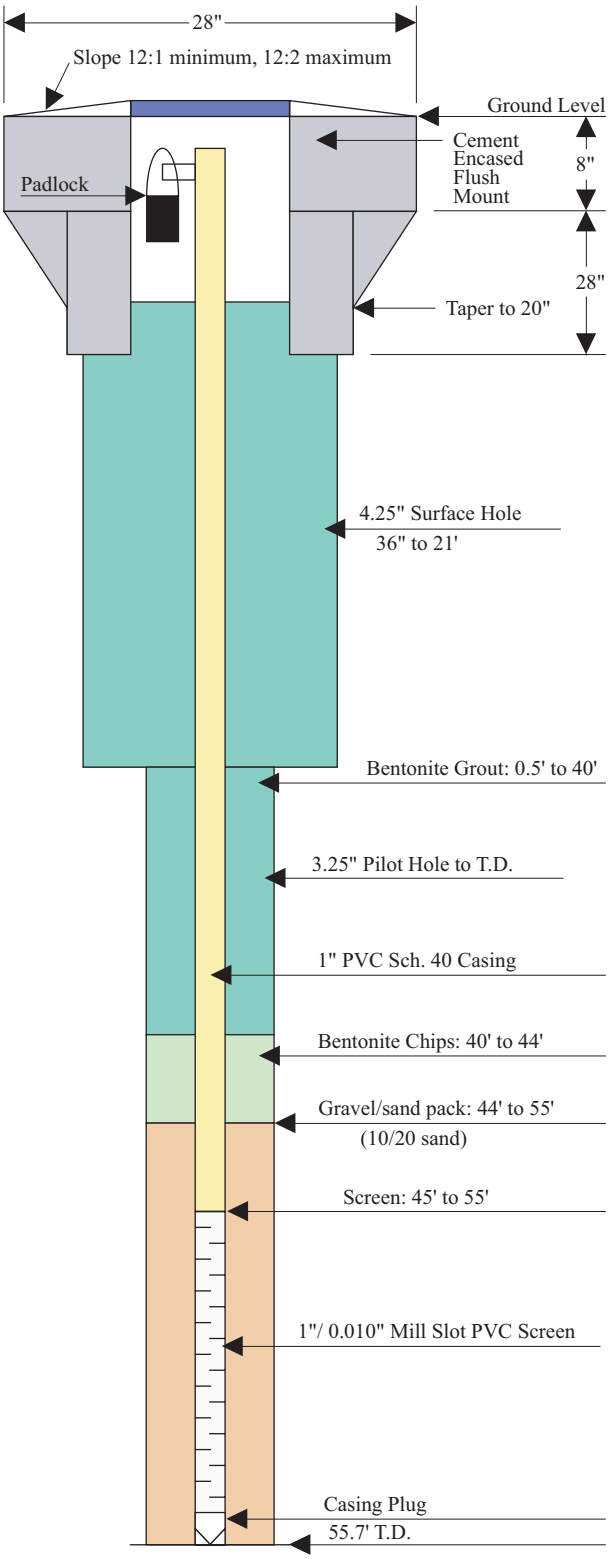
1" PVC Schedule 40 threaded casing and Mill Slot (0.010") well screen.

HOLE SIZE
The hole must be at least 4.25" in diameter for the top 21' and grouted to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack screen size and gradation shall be determined based upon the grain size and gradation of portion or portions of the aquifer to be screened. Gravel pack shall be designed to stabilize the aquifer material and permit the fine fraction to move into the well during development. Gravel/sand pack shall extend to at least 2' above screen.

CONTRACTOR LICENSING
All wells must be constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment.

REGISTRATION
All wells must be registered with the Kansas Department of Health and Environment on form WWC-5 provided by that Department.



(NOT TO SCALE)

MW-08

CORRECTION(S) TO WATER WELL RECORD (WWC-5)
(to rectify lacking or incorrect information)

County: MARION

Location listed as:	**Location changed to:**
Section-Township-Range: 2-17-11E	2-17-3E
Fraction (¼ ¼ ¼):	SE SE SE

Other changes: Initial statements: _____

Changed to: _____

Comments: _____

verification method: location of other monitoring wells in series.

initials: DL date: 11/6/06

submitted by: Kansas Geological Survey, Data Resources Library, 1930 Constant Ave., Lawrence, KS 66047-3726
to: Kansas Dept of Health & Environment, Bureau of Water, 1000 SW Jackson, Suite 420, Topeka, KS 66612-1367.

WATER WELL RECORD Form WWC-5 KSA 82a-1212 ID No. MW-08

1 LOCATION OF WATER WELL: County: Marion | Fraction: SE ¼ SE ¼ SE ¼ | Section Number: 2 | Township Number: T 17 N S | Range Number: R 11 E/W

Distance and direction from nearest town or city street address of well if located within city?

2 WATER WELL OWNER: USDA/CCC
RR#, St. Address, Box # : Stop 0513, Room 4717-S/ 1400 Independence Ave SW
City, State, ZIP Code : Washington, DC 20250-0513
Board of Agriculture, Division of Water Resources Application Number:

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:

N / NW / NE / W / E / SW / SE (X) / S — 1 Mile

4 DEPTH OF COMPLETED WELL 55.5 ft. ELEVATION: 1,436.204'
Depth(s) Groundwater Encountered 1 48 ft. 2 ft. 3 ft.
WELL'S STATIC WATER LEVEL 47.00 ft. below land surface measured on mo/day/yr 09/28/06
Pump test data: Well water was N/A ft. after N/A hours pumping N/A gpm
Est. Yield N/A gpm: Well water was N/A ft. after N/A hours pumping N/A gpm
Bore Hole Diameter 4.25 in. to 21 ft. and 3.5 in. to 55.5 ft.
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering (12) Other (Specify below)
2 Irrigation 4 Industrial 7 Lawn and garden (domestic) (10) Monitoring well Sand Point MW
Was a chemical/bacteriological sample submitted to Department? Yes No X If yes, mo/day/yr sample was submitted N/A
Water Well Disinfected? Yes No X

5 TYPE OF BLANK CASING USED: 1 Steel 3 RMP (SR) 5 Wrought Iron 8 Concrete tile 9 Other (specify below)
(2) PVC 4 ABS 6 Asbestos-Cement 7 Fiberglass
CASING JOINTS: Glued Clamped Welded Threaded X
Blank casing diameter 1" in. to 45 ft., Dia N/A in. to N/A ft., Dia N/A in. to N/A ft.
Casing height above land surface Flush Mount in., weight Schedule 40 lbs./ft. Wall thickness or gauge No. .133"
TYPE OF SCREEN OR PERFORATION MATERIAL: 1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 10 Asbestos-cement
2 Brass 4 Galvanized steel 6 Concrete tile 8 RMP (SR) 9 ABS 11 Other (specify) 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE: 1 Continuous slot (3) Mill slot 2 Louvered shutter 4 Key punched 5 Gauzed wrapped 6 Wire wrapped 7 Torch cut 8 Saw cut 9 Drilled holes 10 Other (specify) 11 None (open hole)
SCREEN-PERFORATED INTERVALS: From 45 ft. to 55 ft. From ft. to ft.
From ft. to ft. From ft. to ft.
GRAVEL PACK INTERVALS: From 44 ft. to 55 ft. From ft. to ft.
From ft. to ft. From ft. to ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3 Bentonite) (4 Other BenSeal Chips)
Grout Intervals From 40 (#3) ft. to 0.5 ft. From 44 (#4) ft. to 40 ft. From N/A ft. to N/A ft.
What is the nearest source of possible contamination:
(1 Septic tank) 2 ~~Sewer lines~~ 3 Watertight sewer lines 4 Lateral lines 5 Cess pool 6 Seepage pit 7 Pit privy 8 Sewage lagoon 9 Feedyard 10 Livestock pens 11 Fuel storage 12 Fertilizer storage 13 Insecticide storage 14 Abandoned water well 15 Oil well/ Gas well 16 Other (specify below)
Direction from well? How many feet? 850' East

FROM	TO	CODE	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2'		Top Soil			
2'	46'		Silt and Clay			
46'	49'		Silty Clay			
49'	50'		Silty Clay with some Sand			
50'	54'		Silty Clay and Sand			
54'	55.5'		Clay and Silt			

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under the business name of Delta Environmental by (signature)

INSTRUCTIONS:. Please fill in blanks and circle the correct answers. Send three copies to Kansas Department of Health and Environment, Bureau of Water, 1000 S W Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 913-296-5545. Send one to WATER WELL OWNER and retain one for your records.

Piezometer (Sand Point Well) MW08: Ramona, KS

SE 1/4 of SE 1/4 of SE 1/4 of Section 2, Twp. 17 South, Rge. 3 East
Marion County, State of Kansas

Date: 9/27/2006

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and a screened vent with a locking pipe plug and padlock.

CONCRETE PAD
Must be a minimum of 8" thick and extend at least 8" larger than the flush mount (28" minimum). Sloped to prevent pooling of water and vegetation around well and to allow for placement of a surveyor pin.

IMPERVIOUS GROUT
The well must be grouted with impervious grout and must be tremied in the hole, with clean fresh water, to have a minimum density of 9.4 lbs. per gallon. Grout must extend from the top of the bentonite chips to 3' BGL.

WELL CASING
Well casing shall terminate as high as possible inside the flush mount and be capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

1" PVC Schedule 40 threaded casing and Mill Slot (0.010") well screen.

HOLE SIZE
The hole must be at least 4.25" in diameter for the top 21' and grouted to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack screen size and gradation shall be determined based upon the grain size and gradation of portion or portions of the aquifer to be screened. Gravel pack shall be designed to stabilize the aquifer material and permit the fine fraction to move into the well during development. Gravel/sand pack shall extend to at least 2' above screen.

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REGISTRATION
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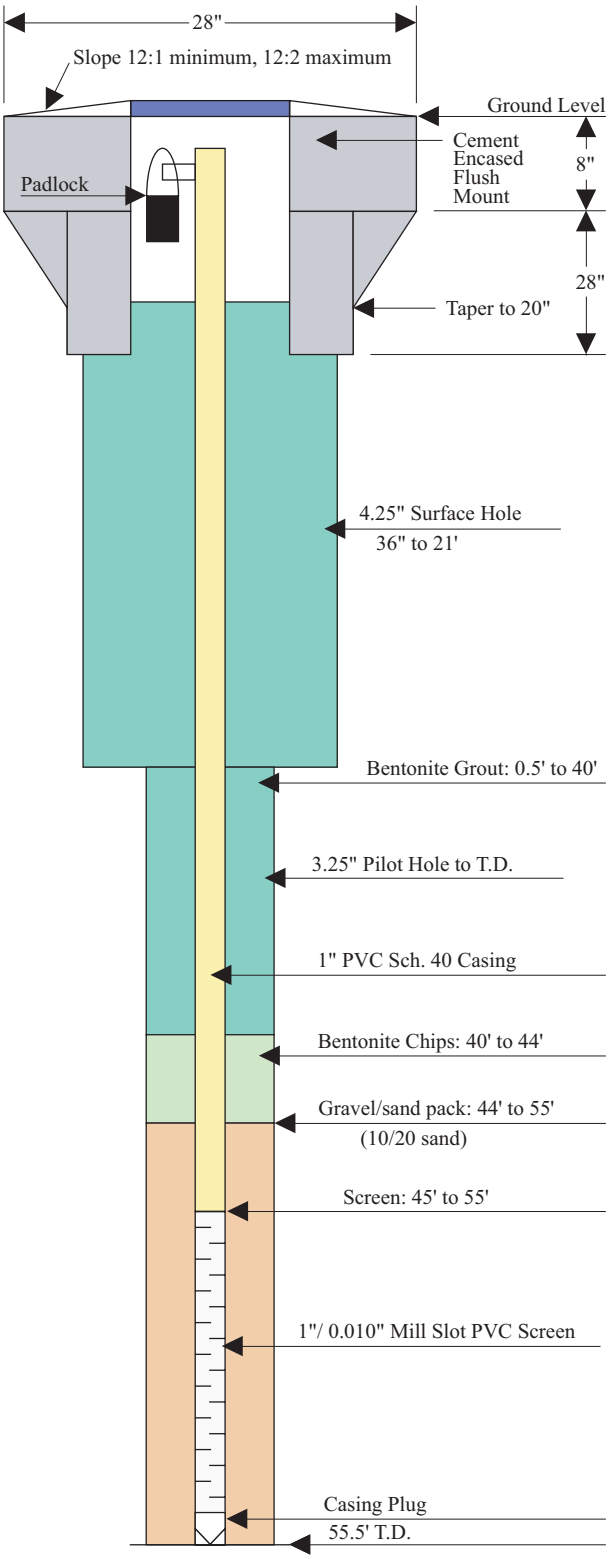


(NOT TO SCALE)

WATER WELL PLUGGING RECORD **Form WWC-5P** **KSA 82a-1212** **ID NO.**

1 LOCATION OF WATER WELL: County: **Marion**	Fraction: **SE ¼ SE ¼ SE ¼**	Section Number: **2**	Township Number: **17S**	Range Number: **3E** E/W

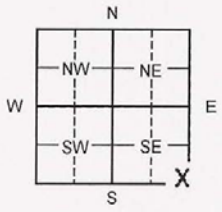
Distance and direction from nearest town or city street address of well if located within city?
SE corner of Ramona, KS

2 WATER WELL OWNER:
KDHE-BER
RR#, St. Address, Box #:

City, State, ZIP Code:
Topeka, KS, 66601

Global Positioning System (decimal degrees, min. of 4 digits)
Latitude:
Longitude:
Elevation:
Datum:
Data Collection Method:

3 MARK WELL'S LOCATION WITH AN "X" IN SECTION BOX:



4 DEPTH OF WELL **46** **ft.**
MW1
WELL'S STATIC WATER LEVEL dry ft

WELL WAS USED AS:

1 Domestic	5 Public Water Supply	9 Dewatering
2 Irrigation	6 Oil Field Water Supply	(10) Monitoring
3 Feedlot	7 Domestic (Lawn & Garden)	11 Injection Well
4 Industrial	8 Air Conditioning	12 Other

Was a chemical/bacteriological sample submitted to Department? Yes ___ No **X**

5 TYPE OF BLANK CASING USED:

1 Steel	3 RMP (SR)	5 Wrought	7 Fiberglass	9 Other (Specify below)
(2) PVC	4 ABS	6 Asbestos-Cement	8 Concrete Tile	

Blank casing diameter 2 in. Was casing pulled? Yes **X** No ___ If yes, how much 46 feet
Casing height above or below land surface 0 in.

6 GROUT PLUG MATERIAL: 1 Neat cement 2 Cement grout (3) Bentonite (4) Other **Soil**

Grout Plug Intervals: From 0 ft., 3 ft., From 3 ft. to 46 ft., From to ft.

What is the nearest source of possible contamination:

1 Septic tank	6 Seepage pit	11 Fuel Storage	(16) Other (specify below)
2 Sewer lines	7 Pit privy	12 Fertilizer storage	
3 Watertight sewer lines	8 Sewage lagoon	13 Insecticide storage	
4 Lateral lines	9 Feedyard	14 Abandoned water well	Direction from well?
5 Cess pool	10 Livestock pens	15 Oil well/Gas well	How many feet?

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS
0	**3**	**Soil**			
3	**46**	**Bentonite**			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was plugged under my jurisdiction and was completed on (mo/day/year) **7/15/2006** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **757**. This Water Well Record was completed on (mo/day/year) **7/13/07** under the business name of **Larsen & Associates, Inc.** by (signature) _____.

INSTRUCTIONS: Please fill in blanks or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 785/296-5522. Send one to Water Well Owner and retain one for your records. Visit us at http://www.kdheks.gov/waterwell.

White Copy

KSA 82a-1212

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Appendix D:

Coordinates Survey Data

TABLE D.1 Coordinates survey data for the 2006 investigation at Ramona, Kansas.

Location	Horizontal Location[a] (ft)		Elevation[b] (ft AMSL)	
	Northing	Easting	Ground	Top of Casing
Vertical-profile cone penetrometer locations				
TI06	96869.19	1581099.76	1437.49	–
TI07	96856.50	1581015.58	1436.57	–
TI08	96965.96	1581084.72	1435.82	–
TI09	97027.85	1581107.16	1435.01	–
TI10	96841.21	1581149.57	1438.57	–
TI11	96902.20	1581057.86	1436.52	–
TI12	96964.70	1581152.95	1436.96	–
TI13	96937.79	1581113.63	1436.75	–
TI14	96908.81	1581172.91	1438.03	–
TI15	96819.28	1581104.98	1438.07	–
Piezometers installed in 2006				
MW04	96787.78	1581247.49	1440.09	1439.52
MW05	96951.28	1581040.40	1435.61	1435.19
MW06	96964.80	1581151.17	1436.96	1436.63
MW07	96842.09	1581151.21	1438.61	1438.15
MW08	96956.89	1581101.45	1436.20	1435.72

[a] Coordinates are in the State Plane, Kansas northern zone. Horizontal datum is North American Datum (NAD) 83.

[b] Vertical datum is converted North American Vertical Datum (NAVD) 29.

Draft Report: Results of the 2006 Investigation of Potential Contamination at the Former CCC/USDA Facility in Ramona, Kansas

Applied Geosciences and Environmental Management Section,
Environmental Science Division,
Argonne National Laboratory, 9700 South Cass Avenue, Argonne, Illinois 60439

Contents:

June 2007

Work sponsored by Commodity Credit Corporation, United States Department of Agriculture

Supplement 1:

Water Level Data

TABLE S1.1 Hand-measured water levels at Ramona.

Well	Depth of Bottom of Hole[a] (ft TOC)[b]	July 20, 2006		November 3, 2006		May 17, 2007	
		Time	Depth to Groundwater (ft TOC)	Time	Depth to Groundwater (ft TOC)	Time	Depth to Groundwater (ft TOC)
MW04/T116	54.35	19:30	50.26	14:16	52.49	14:30	52.91
MW05/T117	~54.0	17:29	46.46	14:47	48.74	13:19	48.39
MW06/T118	54.25	18:20	49.29	15:06	51.14	12:32	51.33
MW07/T119	54.37	19:06	49.06	14:37	51.31	13:45	51.52
MW08/T120	55.05	18:13	46.70	14:55	48.93	12:53	48.81
SB02	83.29	20:25	42.97	15:39	44.81	15:37	43.99
SB03	45.62	19:58	41.86	15:49	44.47	14:51	42.37

[a] Measured July 20, 2006.

[b] TOC, top of casing.

TABLE S1.2 Automatically measured water levels at Ramona from July 2006 to May 2007.

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
7/20/2006	20:00	50.064	46.43	49.218	49.023	46.654	41.815	20:37	42.962
7/21/2006	0:00	50.126	46.412	49.213	49.021	46.628	41.76	0:37	42.936
7/21/2006	4:00	50.134	46.397	49.205	49.013	46.607	41.751	4:37	42.851
7/21/2006	8:00	50.235	46.422	49.249	49.033	46.648	41.782	8:37	42.822
7/21/2006	12:00	50.304	46.433	49.274	49.045	46.66	41.786	12:37	42.815
7/21/2006	16:00	50.274	46.397	49.236	49.013	46.62	41.768	16:37	42.856
7/21/2006	20:00	50.276	46.399	49.239	49.015	46.618	41.766	20:37	43.063
7/22/2006	0:00	50.309	46.403	49.251	49.017	46.628	41.771	0:37	42.959
7/22/2006	4:00	50.294	46.389	49.235	49.002	46.611	41.755	4:37	42.858
7/22/2006	8:00	50.319	46.397	49.253	49.015	46.624	41.768	8:37	43.14
7/22/2006	12:00	50.309	46.447	49.259	49.029	46.734	41.758	12:37	43.773
7/22/2006	16:00	50.266	46.497	49.266	49.053	46.826	41.742	16:37	44.026
7/22/2006	20:00	50.235	46.543	49.278	49.086	46.876	41.747	20:37	43.816
7/23/2006	0:00	50.286	46.572	49.32	49.129	46.872	41.778	0:37	43.505
7/23/2006	4:00	50.28	46.526	49.295	49.122	46.779	41.781	4:37	43.249
7/23/2006	8:00	50.288	46.506	49.292	49.118	46.738	41.794	8:37	43.104
7/23/2006	12:00	50.264	46.478	49.263	49.092	46.706	41.775	12:37	43.097
7/23/2006	16:00	50.206	46.514	49.249	49.09	46.798	41.753	16:37	43.336
7/23/2006	20:00	50.178	46.56	49.27	49.12	46.863	41.758	20:37	43.43
7/24/2006	0:00	50.229	46.572	49.311	49.147	46.839	41.788	0:37	43.167
7/24/2006	4:00	50.206	46.52	49.268	49.12	46.755	41.779	4:37	43.01
7/24/2006	8:00	50.215	46.506	49.267	49.12	46.724	41.786	8:37	43.01
7/24/2006	12:00	50.182	46.485	49.23	49.092	46.72	41.769	12:37	43.162
7/24/2006	16:00	50.149	46.529	49.234	49.102	46.806	41.771	16:37	43.36
7/24/2006	20:00	50.139	46.575	49.259	49.129	46.87	41.768	20:37	43.434
7/25/2006	0:00	50.194	46.612	49.313	49.167	46.898	41.801	0:37	43.304
7/25/2006	4:00	50.196	46.56	49.289	49.155	46.808	41.801	4:37	43.085
7/25/2006	8:00	50.211	46.539	49.28	49.151	46.761	41.806	8:37	42.971
7/25/2006	12:00	50.194	46.51	49.251	49.133	46.728	41.83	12:37	43.14
7/25/2006	16:00	50.147	46.489	49.211	49.104	46.708	41.818	16:37	43.024
7/25/2006	20:00	50.119	46.495	49.197	49.096	46.738	41.797	20:37	43.109
7/26/2006	0:00	50.153	46.554	49.251	49.129	46.822	41.812	0:37	43.113
7/26/2006	4:00	50.151	46.512	49.235	49.114	46.744	41.805	4:37	42.94
7/26/2006	8:00	50.199	46.518	49.259	49.131	46.736	41.831	8:37	42.865
7/26/2006	12:00	50.225	46.504	49.257	49.118	46.722	41.84	12:37	42.928
7/26/2006	16:00	50.213	46.491	49.236	49.104	46.703	41.825	16:37	42.976
7/26/2006	20:00	50.199	46.535	49.245	49.116	46.798	41.816	20:37	43.215
7/27/2006	0:00	50.28	46.587	49.328	49.177	46.839	41.866	0:37	43.075
7/27/2006	4:00	50.264	46.537	49.288	49.145	46.767	41.849	4:37	42.957
7/27/2006	8:00	50.329	46.543	49.321	49.161	46.773	41.873	8:37	43
7/27/2006	12:00	50.36	46.552	49.33	49.169	46.771	41.883	12:37	43.043
7/27/2006	16:00	50.385	46.545	49.336	49.175	46.771	41.89	16:37	42.957
7/27/2006	20:00	50.354	46.529	49.305	49.157	46.745	41.873	20:37	42.896
7/28/2006	0:00	50.387	46.537	49.326	49.167	46.757	41.888	0:37	42.879
7/28/2006	4:00	50.395	46.537	49.322	49.161	46.751	41.888	4:37	42.855
7/28/2006	8:00	50.418	46.547	49.342	49.177	46.763	41.899	8:37	42.973
7/28/2006	12:00	50.418	46.535	49.328	49.165	46.755	41.896	12:37	43.275
7/28/2006	16:00	50.379	46.529	49.299	49.146	46.742	41.933	16:37	43.181
7/28/2006	20:00	50.352	46.526	49.288	49.151	46.736	41.929	20:37	43.097
7/29/2006	0:00	50.387	46.533	49.313	49.153	46.749	41.927	0:37	43.022
7/29/2006	4:00	50.391	46.537	49.317	49.159	46.749	41.927	4:37	42.973
7/29/2006	8:00	50.409	46.541	49.326	49.161	46.755	41.929	8:37	42.935
7/29/2006	12:00	50.403	46.6	49.347	49.183	46.874	41.964	12:37	43.804

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
7/29/2006	16:00	50.362	46.593	49.328	49.179	46.845	41.975	16:37	43.451
7/29/2006	20:00	50.332	46.579	49.309	49.183	46.8	41.966	20:37	43.338
7/30/2006	0:00	50.36	46.577	49.326	49.194	46.796	41.972	0:37	43.196
7/30/2006	4:00	50.344	46.562	49.307	49.181	46.777	41.955	4:37	43.085
7/30/2006	8:00	50.344	46.562	49.307	49.183	46.771	41.956	8:37	43.256
7/30/2006	12:00	50.34	46.554	49.298	49.175	46.763	41.971	12:37	43.688
7/30/2006	16:00	50.287	46.535	49.255	49.151	46.738	42.022	16:37	43.599
7/30/2006	20:00	50.264	46.531	49.242	49.147	46.738	42.014	20:37	43.5
7/31/2006	0:00	50.305	46.554	49.28	49.161	46.757	42.02	0:37	43.297
7/31/2006	4:00	50.295	46.543	49.269	49.149	46.747	42.001	4:37	43.14
7/31/2006	8:00	50.311	46.547	49.28	49.157	46.753	41.994	8:37	43.072
7/31/2006	12:00	50.317	46.545	49.282	49.153	46.753	41.986	12:37	43.085
7/31/2006	16:00	50.293	46.537	49.259	49.143	46.753	41.97	16:37	43.367
7/31/2006	20:00	50.286	46.587	49.282	49.167	46.841	42.003	20:37	43.553
8/1/2006	0:00	50.362	46.652	49.361	49.214	46.907	42.027	0:37	43.502
8/1/2006	4:00	50.377	46.629	49.365	49.226	46.87	42.029	4:37	43.319
8/1/2006	8:00	50.405	46.633	49.377	49.236	46.857	42.035	8:37	43.27
8/1/2006	12:00	50.417	46.662	49.388	49.249	46.911	42.033	12:37	43.389
8/1/2006	16:00	50.399	46.714	49.402	49.267	46.98	42.025	16:37	43.582
8/1/2006	20:00	50.379	46.767	49.427	49.291	47.038	42.068	20:37	43.77
8/2/2006	0:00	50.434	46.794	49.482	49.326	47.05	42.092	0:37	43.613
8/2/2006	4:00	50.434	46.752	49.465	49.33	47.011	42.096	4:37	43.471
8/2/2006	8:00	50.477	46.748	49.482	49.348	46.991	42.107	8:37	43.555
8/2/2006	12:00	50.501	46.746	49.486	49.314	46.986	42.118	12:37	43.84
8/2/2006	16:00	50.469	46.804	49.488	49.35	47.056	42.105	16:37	43.98
8/2/2006	20:00	50.536	46.84	49.548	49.34	47.075	42.142	20:37	43.688
8/3/2006	0:00	50.559	46.831	49.565	49.377	47.077	42.159	0:37	43.495
8/3/2006	4:00	50.591	46.808	49.565	49.375	47.056	42.16	4:37	43.381
8/3/2006	8:00	50.643	46.825	49.596	49.407	47.06	42.198	8:37	43.319
8/3/2006	12:00	50.673	46.825	49.604	49.409	47.068	42.198	12:37	43.574
8/3/2006	16:00	50.643	46.886	49.61	49.415	47.138	42.196	16:37	43.664
8/3/2006	20:00	50.635	46.946	49.642	49.428	47.19	42.205	20:37	43.637
8/4/2006	0:00	50.686	46.976	49.693	49.452	47.21	42.237	0:37	43.517
8/4/2006	4:00	50.673	46.925	49.666	49.44	47.161	42.229	4:37	43.386
8/4/2006	8:00	50.702	46.913	49.673	49.466	47.151	42.25	8:37	43.328
8/4/2006	12:00	50.686	46.89	49.646	49.454	47.126	42.244	12:37	43.362
8/4/2006	16:00	50.622	46.846	49.588	49.446	47.083	42.242	16:37	43.314
8/4/2006	20:00	50.583	46.829	49.562	49.452	47.068	42.242	20:37	43.282
8/5/2006	0:00	50.591	46.819	49.56	49.444	47.05	42.242	0:37	43.215
8/5/2006	4:00	50.557	46.798	49.527	49.428	47.025	42.229	4:37	43.058
8/5/2006	8:00	50.565	46.802	49.531	49.432	47.021	42.233	8:37	43.14
8/5/2006	12:00	50.567	46.794	49.525	49.42	47.011	42.231	12:37	43.422
8/5/2006	16:00	50.534	46.819	49.515	49.417	47.048	42.22	16:37	43.528
8/5/2006	20:00	50.516	46.879	49.538	49.413	47.11	42.216	20:37	43.628
8/6/2006	0:00	50.577	46.925	49.6	49.426	47.144	42.244	0:37	43.531
8/6/2006	4:00	50.596	46.896	49.602	49.432	47.122	42.261	4:37	43.376
8/6/2006	8:00	50.626	46.89	49.608	49.45	47.114	42.285	8:37	43.376
8/6/2006	12:00	50.649	46.888	49.612	49.452	47.109	42.363	12:37	43.686
8/6/2006	16:00	50.6	46.859	49.571	49.442	47.077	42.402	16:37	43.657
8/6/2006	20:00	50.655	46.877	49.614	49.466	47.097	42.42	20:37	43.717
8/7/2006	0:00	50.68	46.884	49.621	49.46	47.095	42.42	0:37	43.645
8/7/2006	4:00	50.712	46.894	49.639	49.468	47.105	42.43	4:37	43.562
8/7/2006	8:00	50.747	46.907	49.664	49.483	47.118	42.448	8:37	43.553

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
8/7/2006	12:00	50.753	46.921	49.666	49.483	47.146	42.441	12:37	43.608
8/7/2006	16:00	50.716	46.946	49.658	49.479	47.181	42.426	16:37	43.765
8/7/2006	20:00	50.704	47.015	49.687	49.499	47.259	42.441	20:37	43.813
8/8/2006	0:00	50.759	47.042	49.737	49.507	47.274	42.45	0:37	43.64
8/8/2006	4:00	50.725	47.001	49.706	49.501	47.228	42.441	4:37	43.507
8/8/2006	8:00	50.762	46.99	49.723	49.519	47.21	42.454	8:37	43.62
8/8/2006	12:00	50.754	46.976	49.708	49.521	47.196	42.489	12:37	43.924
8/8/2006	16:00	50.706	46.967	49.675	49.519	47.187	42.539	16:37	44.258
8/8/2006	20:00	50.684	46.967	49.667	49.534	47.194	42.541	20:37	44.074
8/9/2006	0:00	50.715	46.99	49.693	49.54	47.212	42.548	0:37	43.883
8/9/2006	4:00	50.692	46.984	49.675	49.536	47.202	42.539	4:37	43.76
8/9/2006	8:00	50.682	46.986	49.673	49.546	47.208	42.539	8:37	43.727
8/9/2006	12:00	50.684	47.022	49.685	49.552	47.261	42.539	12:37	43.886
8/9/2006	16:00	50.639	47.07	49.685	49.546	47.321	42.522	16:37	44.533
8/9/2006	20:00	50.627	47.132	49.727	49.572	47.384	42.543	20:37	44.588
8/10/2006	0:00	50.675	47.174	49.779	49.578	47.415	42.619	0:37	44.405
8/10/2006	4:00	50.692	47.157	49.785	49.595	47.392	42.691	4:37	44.217
8/10/2006	8:00	50.7	47.153	49.783	49.611	47.392	42.747	8:37	44.304
8/10/2006	12:00	50.723	47.214	49.814	49.625	47.462	42.769	12:37	44.798
8/10/2006	16:00	50.745	47.251	49.856	49.645	47.495	42.769	16:37	44.596
8/10/2006	20:00	50.716	47.243	49.833	49.635	47.468	42.786	20:37	44.221
8/11/2006	0:00	50.788	47.224	49.872	49.647	47.44	42.784	0:37	43.98
8/11/2006	4:00	50.808	47.189	49.862	49.662	47.413	42.782	4:37	43.816
8/11/2006	8:00	50.815	47.157	49.845	49.664	47.384	42.782	8:37	43.707
8/11/2006	12:00	50.833	47.145	49.843	49.67	47.366	42.775	12:37	43.647
8/11/2006	16:00	50.79	47.12	49.806	49.68	47.333	42.771	16:37	43.599
8/11/2006	20:00	50.774	47.109	49.793	49.688	47.31	42.765	20:37	43.584
8/12/2006	0:00	50.821	47.116	49.81	49.69	47.306	42.767	0:37	43.635
8/12/2006	4:00	50.817	47.107	49.8	49.686	47.3	42.756	4:37	43.669
8/12/2006	8:00	50.823	47.095	49.789	49.674	47.3	42.756	8:37	43.949
8/12/2006	12:00	50.839	47.17	49.824	49.68	47.399	42.756	12:37	44.057
8/12/2006	16:00	50.806	47.218	49.831	49.674	47.468	42.745	16:37	44.108
8/12/2006	20:00	50.776	47.266	49.849	49.692	47.518	42.749	20:37	44.093
8/13/2006	0:00	50.821	47.255	49.876	49.692	47.46	42.758	0:37	43.874
8/13/2006	4:00	50.829	47.22	49.866	49.688	47.429	42.76	4:37	43.731
8/13/2006	8:00	50.858	47.205	49.878	49.696	47.413	42.773	8:37	43.669
8/13/2006	12:00	50.852	47.178	49.852	49.688	47.39	42.769	12:37	43.628
8/13/2006	16:00	50.806	47.143	49.808	49.678	47.356	42.754	16:37	43.661
8/13/2006	20:00	50.851	47.205	49.86	49.717	47.442	42.784	20:37	44.033
8/14/2006	0:00	50.942	47.274	49.937	49.717	47.491	42.797	0:37	43.806
8/14/2006	4:00	50.95	47.241	49.924	49.688	47.448	42.791	4:37	43.683
8/14/2006	8:00	50.989	47.249	49.957	49.715	47.448	42.821	8:37	43.625
8/14/2006	12:00	51.027	47.241	49.972	49.709	47.448	42.828	12:37	43.591
8/14/2006	16:00	51.028	47.222	49.943	49.698	47.427	42.821	16:37	43.562
8/14/2006	20:00	50.983	47.201	49.912	49.704	47.403	42.81	20:37	43.526
8/15/2006	0:00	51.019	47.205	49.935	49.711	47.407	42.821	0:37	43.517
8/15/2006	4:00	51.027	47.201	49.933	49.713	47.401	42.825	4:37	43.502
8/15/2006	8:00	51.017	47.191	49.92	49.706	47.392	42.825	8:37	43.454
8/15/2006	12:00	51.036	47.193	49.922	49.704	47.392	42.819	12:37	43.492
8/15/2006	16:00	50.993	47.172	49.889	49.698	47.374	42.808	16:37	43.5
8/15/2006	20:00	50.95	47.17	49.87	49.706	47.376	42.799	20:37	43.642
8/16/2006	0:00	50.966	47.237	49.903	49.706	47.462	42.801	0:37	43.693
8/16/2006	4:00	50.968	47.241	49.918	49.711	47.442	42.801	4:37	43.57

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
8/16/2006	8:00	50.964	47.226	49.916	49.715	47.423	42.81	8:37	43.524
8/16/2006	12:00	50.987	47.214	49.91	49.706	47.413	42.808	12:37	43.509
8/16/2006	16:00	50.944	47.243	49.897	49.702	47.507	42.784	16:37	43.888
8/16/2006	20:00	50.896	47.314	49.92	49.711	47.612	42.784	20:37	44.081
8/17/2006	0:00	50.939	47.362	49.972	49.713	47.575	42.801	0:37	43.823
8/17/2006	4:00	50.944	47.322	49.962	49.704	47.516	42.803	4:37	43.657
8/17/2006	8:00	50.962	47.295	49.968	49.715	47.493	42.814	8:37	43.591
8/17/2006	12:00	50.962	47.272	49.957	49.711	47.475	42.817	12:37	43.548
8/17/2006	16:00	50.927	47.243	49.922	49.709	47.446	42.808	16:37	43.538
8/17/2006	20:00	50.915	47.297	49.935	49.719	47.581	42.814	20:37	43.76
8/18/2006	0:00	50.98	47.314	49.964	49.711	47.528	42.821	0:37	43.618
8/18/2006	4:00	51.007	47.304	49.984	49.719	47.513	42.83	4:37	43.558
8/18/2006	8:00	50.991	47.276	49.962	49.723	47.48	42.83	8:37	43.505
8/18/2006	12:00	51.003	47.264	49.955	49.719	47.466	42.83	12:37	43.485
8/18/2006	16:00	50.966	47.23	49.916	49.711	47.438	42.817	16:37	43.437
8/18/2006	20:00	50.948	47.243	49.926	49.737	47.445	42.825	20:37	43.454
8/19/2006	0:00	51.025	47.253	49.964	49.741	47.449	42.832	0:37	43.389
8/19/2006	4:00	51.07	47.266	49.984	49.745	47.458	42.841	4:37	43.386
8/19/2006	8:00	51.087	47.241	49.957	49.723	47.437	42.829	8:37	43.362
8/19/2006	12:00	51.097	47.249	49.98	49.737	47.45	42.83	12:37	43.372
8/19/2006	16:00	51.093	47.239	49.958	49.727	47.436	42.821	16:37	43.372
8/19/2006	20:00	51.083	47.304	49.978	49.735	47.591	42.817	20:37	43.833
8/20/2006	0:00	51.107	47.372	50.02	49.733	47.616	42.814	0:37	43.717
8/20/2006	4:00	51.11	47.356	50.018	49.731	47.552	42.812	4:37	43.594
8/20/2006	8:00	51.122	47.337	50.032	49.735	47.538	42.83	8:37	43.548
8/20/2006	12:00	51.14	47.343	50.039	49.739	47.622	42.828	12:37	43.768
8/20/2006	16:00	51.134	47.402	50.041	49.729	47.747	42.812	16:37	44.033
8/20/2006	20:00	51.116	47.464	50.066	49.737	47.827	42.814	20:37	44.183
8/21/2006	0:00	51.154	47.527	50.118	49.743	47.917	42.829	0:37	44.306
8/21/2006	4:00	51.177	47.583	50.155	49.743	47.966	42.841	4:37	44.378
8/21/2006	8:00	51.201	47.623	50.197	49.753	47.913	42.858	8:37	44.156
8/21/2006	12:00	51.232	47.581	50.19	49.737	47.79	42.86	12:37	43.953
8/21/2006	16:00	51.222	47.54	50.172	49.743	47.718	42.862	16:37	43.826
8/21/2006	20:00	51.214	47.556	50.184	49.753	47.887	42.871	20:37	44.18
8/22/2006	0:00	51.247	47.575	50.211	49.753	47.815	42.877	0:37	43.934
8/22/2006	4:00	51.249	47.535	50.199	49.755	47.737	42.886	4:37	43.797
8/22/2006	8:00	51.261	47.514	50.203	49.761	47.712	42.893	8:37	43.731
8/22/2006	12:00	51.269	47.485	50.192	49.757	47.681	42.895	12:37	43.719
8/22/2006	16:00	51.236	47.439	50.149	49.747	47.62	42.875	16:37	43.671
8/22/2006	20:00	51.201	47.473	50.145	49.759	47.817	42.877	20:37	44.057
8/23/2006	0:00	51.218	47.523	50.176	49.761	47.803	42.877	0:37	43.934
8/23/2006	4:00	51.208	47.494	50.145	49.747	47.696	42.866	4:37	43.758
8/23/2006	8:00	51.189	47.469	50.142	49.763	47.657	42.873	8:37	43.683
8/23/2006	12:00	51.183	47.431	50.118	49.755	47.618	42.864	12:37	43.69
8/23/2006	16:00	51.136	47.385	50.068	49.747	47.56	42.849	16:37	43.647
8/23/2006	20:00	51.089	47.385	50.051	49.751	47.68	42.836	20:37	43.917
8/24/2006	0:00	51.079	47.416	50.064	49.753	47.655	42.836	0:37	43.729
8/24/2006	4:00	51.066	47.402	50.057	49.757	47.601	42.83	4:37	43.62
8/24/2006	8:00	51.044	47.368	50.038	49.755	47.562	42.823	8:37	43.562
8/24/2006	12:00	51.024	47.337	50.012	49.747	47.538	42.806	12:37	43.548
8/24/2006	16:00	50.964	47.306	49.978	49.745	47.505	42.793	16:37	43.517
8/24/2006	20:00	50.927	47.331	49.972	49.753	47.64	42.782	20:37	43.835
8/25/2006	0:00	50.958	47.368	49.995	49.753	47.599	42.78	0:37	43.637

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
8/25/2006	4:00	50.964	47.36	50.001	49.763	47.566	42.778	4:37	43.55
8/25/2006	8:00	50.993	47.339	50.005	49.766	47.55	42.78	8:37	43.507
8/25/2006	12:00	51.015	47.326	50.001	49.759	47.536	42.779	12:37	43.483
8/25/2006	16:00	50.993	47.304	49.982	49.753	47.515	42.769	16:37	43.485
8/25/2006	20:00	50.985	47.293	49.972	49.759	47.505	42.765	20:37	43.456
8/26/2006	0:00	51.083	47.333	50.039	49.78	47.556	42.788	0:37	43.468
8/26/2006	4:00	51.118	47.329	50.036	49.77	47.544	42.791	4:37	43.476
8/26/2006	8:00	51.148	47.341	50.059	49.78	47.558	42.804	8:37	43.48
8/26/2006	12:00	51.173	47.337	50.061	49.776	47.554	42.797	12:37	43.473
8/26/2006	16:00	51.187	47.331	50.055	49.766	47.552	42.795	16:37	43.495
8/26/2006	20:00	51.179	47.322	50.041	49.768	47.536	42.782	20:37	43.483
8/27/2006	0:00	51.197	47.331	50.061	49.77	47.554	42.788	0:37	43.497
8/27/2006	4:00	51.191	47.318	50.043	49.766	47.54	42.779	4:37	43.463
8/27/2006	8:00	51.181	47.31	50.038	49.768	47.527	42.777	8:37	43.456
8/27/2006	12:00	51.193	47.31	50.045	49.772	47.534	42.775	12:37	43.463
8/27/2006	16:00	51.173	47.285	50.011	49.755	47.511	42.755	16:37	43.459
8/27/2006	20:00	51.159	47.285	50.012	49.768	47.509	42.755	20:37	43.447
8/28/2006	0:00	51.185	47.304	50.034	49.772	47.529	42.76	0:37	43.459
8/28/2006	4:00	51.181	47.301	50.032	49.774	47.523	42.76	4:37	43.459
8/28/2006	8:00	51.198	47.308	50.043	49.774	47.532	42.758	8:37	43.463
8/28/2006	12:00	51.206	47.306	50.043	49.768	47.532	42.756	12:37	43.476
8/28/2006	16:00	51.206	47.299	50.032	49.761	47.523	42.747	16:37	43.5
8/28/2006	20:00	51.216	47.314	50.059	49.778	47.544	42.764	20:37	43.5
8/29/2006	0:00	51.249	47.331	50.076	49.776	47.56	42.769	0:37	43.514
8/29/2006	4:00	51.263	47.329	50.078	49.774	47.558	42.764	4:37	43.519
8/29/2006	8:00	51.277	47.341	50.095	49.782	47.57	42.775	8:37	43.524
8/29/2006	12:00	51.286	47.339	50.091	49.776	47.568	42.766	12:37	43.529
8/29/2006	16:00	51.263	47.318	50.063	49.768	47.542	42.755	16:37	43.521
8/29/2006	20:00	51.24	47.31	50.051	49.772	47.536	42.749	20:37	43.507
8/30/2006	0:00	51.249	47.322	50.066	49.778	47.552	42.753	0:37	43.505
8/30/2006	4:00	51.253	47.322	50.068	49.778	47.552	42.753	4:37	43.497
8/30/2006	8:00	51.259	47.329	50.076	49.782	47.558	42.753	8:37	43.492
8/30/2006	12:00	51.261	47.322	50.068	49.776	47.554	42.747	12:37	43.574
8/30/2006	16:00	51.228	47.299	50.028	49.761	47.521	42.732	16:37	43.519
8/30/2006	20:00	51.2	47.335	50.039	49.778	47.679	42.734	20:37	43.842
8/31/2006	0:00	51.228	47.416	50.088	49.782	47.712	42.738	0:37	43.775
8/31/2006	4:00	51.237	47.42	50.101	49.782	47.665	42.745	4:37	43.632
8/31/2006	8:00	51.249	47.41	50.111	49.786	47.64	42.755	8:37	43.616
8/31/2006	12:00	51.259	47.395	50.109	49.778	47.624	42.751	12:37	43.671
8/31/2006	16:00	51.244	47.375	50.088	49.774	47.595	42.749	16:37	43.857
8/31/2006	20:00	51.236	47.366	50.09	49.782	47.597	42.758	20:37	43.99
9/1/2006	0:00	51.255	47.383	50.111	49.79	47.612	42.773	0:37	43.789
9/1/2006	4:00	51.288	47.391	50.136	49.788	47.636	42.782	4:37	43.719
9/1/2006	8:00	51.298	47.393	50.132	49.782	47.626	42.792	8:37	43.671
9/1/2006	12:00	51.3	47.389	50.128	49.782	47.618	42.788	12:37	43.7
9/1/2006	16:00	51.29	47.383	50.118	49.784	47.609	42.79	16:37	43.705
9/1/2006	20:00	51.281	47.383	50.122	49.792	47.612	42.799	20:37	43.724
9/2/2006	0:00	51.306	47.4	50.145	49.796	47.638	42.81	0:37	43.7
9/2/2006	4:00	51.314	47.402	50.147	49.794	47.634	42.814	4:37	43.683
9/2/2006	8:00	51.332	47.418	50.174	49.808	47.659	42.831	8:37	43.686
9/2/2006	12:00	51.355	47.425	50.186	49.802	47.669	42.84	12:37	43.686
9/2/2006	16:00	51.357	47.416	50.167	49.796	47.648	42.836	16:37	43.826
9/2/2006	20:00	51.347	47.412	50.161	49.798	47.644	42.842	20:37	43.741

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
9/3/2006	0:00	51.349	47.42	50.172	49.802	47.653	42.849	0:37	43.715
9/3/2006	4:00	51.341	47.414	50.163	49.8	47.644	42.849	4:37	43.69
9/3/2006	8:00	51.343	47.418	50.17	49.804	47.653	42.857	8:37	43.69
9/3/2006	12:00	51.353	47.433	50.17	49.8	47.761	42.849	12:37	43.898
9/3/2006	16:00	51.326	47.494	50.167	49.794	47.884	42.842	16:37	44.195
9/3/2006	20:00	51.31	47.542	50.19	49.802	47.835	42.847	20:37	44.004
9/4/2006	0:00	51.326	47.542	50.211	49.804	47.79	42.857	0:37	43.898
9/4/2006	4:00	51.328	47.527	50.205	49.808	47.757	42.866	4:37	43.833
9/4/2006	8:00	51.345	47.527	50.23	49.82	47.765	42.884	8:37	43.809
9/4/2006	12:00	51.367	47.521	50.238	49.814	47.765	42.886	12:37	43.888
9/4/2006	16:00	51.339	47.552	50.234	49.812	47.919	42.89	16:37	44.212
9/4/2006	20:00	51.343	47.631	50.286	49.827	47.995	42.907	20:37	44.209
9/5/2006	0:00	51.363	47.636	50.302	49.823	47.905	42.914	0:37	44.033
9/5/2006	4:00	51.367	47.619	50.303	49.827	47.858	42.92	4:37	43.934
9/5/2006	8:00	51.378	47.611	50.317	49.831	47.847	42.929	8:37	43.898
9/5/2006	12:00	51.39	47.588	50.303	49.82	47.823	42.923	12:37	43.883
9/5/2006	16:00	51.371	47.565	50.273	49.818	47.784	42.923	16:37	43.896
9/5/2006	20:00	51.359	47.59	50.276	49.827	47.942	42.931	20:37	44.253
9/6/2006	0:00	51.378	47.623	50.307	49.833	47.888	42.933	0:37	44.036
9/6/2006	4:00	51.382	47.611	50.302	49.833	47.845	42.94	4:37	43.941
9/6/2006	8:00	51.384	47.6	50.305	49.841	47.831	42.949	8:37	43.896
9/6/2006	12:00	51.388	47.583	50.298	49.827	47.817	42.946	12:37	43.864
9/6/2006	16:00	51.363	47.563	50.261	49.82	47.776	42.942	16:37	43.823
9/6/2006	20:00	51.337	47.548	50.248	49.827	47.763	42.944	20:37	43.816
9/7/2006	0:00	51.341	47.546	50.253	49.829	47.773	42.949	0:37	43.804
9/7/2006	4:00	51.332	47.535	50.24	49.831	47.755	42.946	4:37	43.765
9/7/2006	8:00	51.33	47.542	50.253	49.845	47.769	42.957	8:37	43.787
9/7/2006	12:00	51.328	47.531	50.242	49.831	47.763	42.953	12:37	43.925
9/7/2006	16:00	51.302	47.514	50.207	49.808	47.73	42.942	16:37	43.883
9/7/2006	20:00	51.279	47.508	50.199	49.814	47.724	42.951	20:37	43.809
9/8/2006	0:00	51.287	47.517	50.213	49.816	47.743	42.953	0:37	43.785
9/8/2006	4:00	51.285	47.517	50.211	49.823	47.741	42.957	4:37	43.753
9/8/2006	8:00	51.29	47.527	50.232	49.831	47.761	42.973	8:37	43.748
9/8/2006	12:00	51.304	47.531	50.238	49.831	47.769	42.968	12:37	43.76
9/8/2006	16:00	51.298	47.517	50.209	49.823	47.737	42.955	16:37	43.748
9/8/2006	20:00	51.287	47.521	50.213	49.835	47.745	42.966	20:37	43.736
9/9/2006	0:00	51.308	47.529	50.234	49.835	47.769	42.966	0:37	43.751
9/9/2006	4:00	51.302	47.531	50.226	49.835	47.755	42.977	4:37	43.719
9/9/2006	8:00	51.304	47.527	50.224	49.835	47.755	42.97	8:37	43.719
9/9/2006	12:00	51.306	47.527	50.226	49.839	47.759	42.964	12:37	43.715
9/9/2006	16:00	51.277	47.521	50.188	49.827	47.815	42.955	16:37	43.934
9/9/2006	20:00	51.263	47.569	50.211	49.839	47.833	42.966	20:37	43.859
9/10/2006	0:00	51.255	47.573	50.23	49.843	47.819	42.966	0:37	43.806
9/10/2006	4:00	51.244	47.567	50.221	49.841	47.79	42.97	4:37	43.765
9/10/2006	8:00	51.238	47.563	50.23	49.847	47.79	42.981	8:37	43.741
9/10/2006	12:00	51.242	47.563	50.236	49.845	47.796	42.977	12:37	43.751
9/10/2006	16:00	51.234	47.579	50.226	49.843	47.919	42.975	16:37	44.132
9/10/2006	20:00	51.234	47.661	50.276	49.857	48.056	42.992	20:37	44.246
9/11/2006	0:00	51.263	47.688	50.315	49.859	47.97	42.996	0:37	44.048
9/11/2006	4:00	51.279	47.684	50.323	49.863	47.929	43.003	4:37	43.966
9/11/2006	8:00	51.29	47.671	50.332	49.863	47.911	43.016	8:37	43.915
9/11/2006	12:00	51.318	47.669	50.35	49.869	47.913	43.016	12:37	43.91
9/11/2006	16:00	51.333	47.654	50.338	49.861	47.888	43.007	16:37	43.879

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
9/11/2006	20:00	51.337	47.652	50.348	49.871	47.89	43.018	20:37	43.876
9/12/2006	0:00	51.349	47.661	50.369	49.871	47.901	43.025	0:37	43.876
9/12/2006	4:00	51.355	47.661	50.369	49.871	47.894	43.027	4:37	43.871
9/12/2006	8:00	51.367	47.667	50.384	49.882	47.903	43.033	8:37	43.867
9/12/2006	12:00	51.38	47.669	50.39	49.879	47.909	43.029	12:37	43.869
9/12/2006	16:00	51.371	47.648	50.354	49.869	47.87	43.02	16:37	43.859
9/12/2006	20:00	51.359	47.638	50.34	49.873	47.858	43.027	20:37	43.857
9/13/2006	0:00	51.361	47.638	50.348	49.88	47.868	43.027	0:37	43.833
9/13/2006	4:00	51.355	47.625	50.332	49.877	47.853	43.025	4:37	43.833
9/13/2006	8:00	51.355	47.634	50.342	49.884	47.864	43.035	8:37	43.84
9/13/2006	12:00	51.351	47.615	50.317	49.876	47.845	43.025	12:37	43.823
9/13/2006	16:00	51.324	47.598	50.276	49.869	47.81	43.014	16:37	43.811
9/13/2006	20:00	51.308	47.627	50.28	49.877	47.966	43.022	20:37	44.25
9/14/2006	0:00	51.316	47.661	50.303	49.884	47.919	43.025	0:37	44.016
9/14/2006	4:00	51.318	47.657	50.305	49.882	47.892	43.029	4:37	43.932
9/14/2006	8:00	51.324	47.659	50.319	49.888	47.894	43.038	8:37	43.823
9/14/2006	12:00	51.332	47.654	50.317	49.884	47.886	43.035	12:37	44.11
9/14/2006	16:00	51.316	47.634	50.292	49.877	47.853	43.027	16:37	44.258
9/14/2006	20:00	51.31	47.692	50.317	49.89	48.071	43.038	20:37	44.521
9/15/2006	0:00	51.322	47.738	50.348	49.898	48.024	43.042	0:37	44.238
9/15/2006	4:00	51.322	47.73	50.344	49.902	47.972	43.046	4:37	44.113
9/15/2006	8:00	51.326	47.729	50.355	49.908	47.96	43.059	8:37	44.043
9/15/2006	12:00	51.322	47.711	50.338	49.904	47.933	43.053	12:37	43.995
9/15/2006	16:00	51.298	47.677	50.298	49.898	47.884	43.04	16:37	43.874
9/15/2006	20:00	51.283	47.665	50.288	49.9	47.878	43.04	20:37	43.888
9/16/2006	0:00	51.29	47.657	50.294	49.906	47.88	43.064	0:37	43.869
9/16/2006	4:00	51.302	47.671	50.315	49.908	47.89	43.053	4:37	43.816
9/16/2006	8:00	51.298	47.661	50.305	49.908	47.876	43.068	8:37	43.821
9/16/2006	12:00	51.294	47.642	50.286	49.906	47.862	43.057	12:37	43.821
9/16/2006	16:00	51.273	47.617	50.251	49.894	47.827	43.044	16:37	43.797
9/16/2006	20:00	51.267	47.627	50.275	49.908	47.849	43.053	20:37	43.801
9/17/2006	0:00	51.261	47.611	50.253	49.902	47.827	43.101	0:37	43.775
9/17/2006	4:00	51.302	47.667	50.348	49.924	47.907	43.103	4:37	43.739
9/17/2006	8:00	51.337	47.675	50.371	49.931	47.936	43.094	8:37	43.763
9/17/2006	12:00	51.357	47.698	50.39	49.926	47.94	43.12	12:37	43.828
9/17/2006	16:00	51.353	47.679	50.359	49.918	47.905	43.098	16:37	44.019
9/17/2006	20:00	51.347	47.686	50.369	49.926	47.913	43.116	20:37	43.941
9/18/2006	0:00	51.361	47.692	50.388	49.934	47.933	43.118	0:37	43.917
9/18/2006	4:00	51.365	47.694	50.388	49.934	47.931	43.129	4:37	43.9
9/18/2006	8:00	51.378	47.713	50.417	49.943	47.958	43.142	8:37	43.908
9/18/2006	12:00	51.39	47.717	50.427	49.945	47.968	43.15	12:37	43.917
9/18/2006	16:00	51.386	47.713	50.404	49.939	47.94	43.146	16:37	43.905
9/18/2006	20:00	51.396	47.721	50.429	49.947	47.966	43.164	20:37	43.92
9/19/2006	0:00	51.418	47.742	50.458	49.955	47.991	43.17	0:37	43.929
9/19/2006	4:00	51.423	47.742	50.46	49.955	47.987	43.177	4:37	43.937
9/19/2006	8:00	51.441	47.765	50.494	49.963	48.017	43.196	8:37	43.961
9/19/2006	12:00	51.453	47.765	50.492	49.967	48.013	43.196	12:37	43.97
9/19/2006	16:00	51.441	47.746	50.45	49.955	47.97	43.187	16:37	43.953
9/19/2006	20:00	51.431	47.74	50.444	49.961	47.966	43.192	20:37	43.939
9/20/2006	0:00	51.429	47.74	50.442	49.965	47.968	43.196	0:37	43.917
9/20/2006	4:00	51.423	47.738	50.431	49.963	47.964	43.196	4:37	43.922
9/20/2006	8:00	51.419	47.732	50.429	49.961	47.96	43.196	8:37	43.925
9/20/2006	12:00	51.402	47.711	50.386	49.959	47.923	43.178	12:37	43.915

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
9/20/2006	16:00	51.367	47.684	50.336	49.947	47.874	43.157	16:37	43.869
9/20/2006	20:00	51.347	47.707	50.342	49.955	48.036	43.152	20:37	44.18
9/21/2006	0:00	51.339	47.746	50.348	49.961	48.017	43.137	0:37	44.069
9/21/2006	4:00	51.324	47.736	50.33	49.959	47.954	43.127	4:37	43.956
9/21/2006	8:00	51.302	47.723	50.323	49.957	47.931	43.118	8:37	43.9
9/21/2006	12:00	51.283	47.688	50.288	49.953	47.882	43.096	12:37	43.838
9/21/2006	16:00	51.23	47.623	50.23	49.932	47.788	43.066	16:37	43.758
9/21/2006	20:00	51.195	47.631	50.278	49.941	47.827	43.081	20:37	43.734
9/22/2006	0:00	51.21	47.644	50.305	49.961	47.872	43.089	0:37	43.717
9/22/2006	4:00	51.228	47.663	50.332	49.967	47.899	43.101	4:37	43.758
9/22/2006	8:00	51.253	47.686	50.371	49.975	47.935	43.12	8:37	43.777
9/22/2006	12:00	51.267	47.686	50.375	49.977	47.933	43.122	12:37	43.801
9/22/2006	16:00	51.269	47.694	50.379	49.975	47.929	43.124	16:37	43.809
9/22/2006	20:00	51.283	47.713	50.406	49.983	47.956	43.146	20:37	43.809
9/23/2006	0:00	51.3	47.728	50.433	49.989	47.981	43.152	0:37	43.855
9/23/2006	4:00	51.314	47.744	50.454	49.998	47.999	43.159	4:37	43.862
9/23/2006	8:00	51.316	47.742	50.452	49.998	47.989	43.178	8:37	43.874
9/23/2006	12:00	51.335	47.755	50.473	50.006	48.007	43.185	12:37	43.912
9/23/2006	16:00	51.345	47.771	50.488	50.012	48.017	43.2	16:37	44.091
9/23/2006	20:00	51.369	47.794	50.527	50.022	48.052	43.218	20:37	44.038
9/24/2006	0:00	51.396	47.809	50.552	50.032	48.073	43.23	0:37	44.04
9/24/2006	4:00	51.416	47.824	50.569	50.039	48.081	43.241	4:37	44.016
9/24/2006	8:00	51.439	47.845	50.604	50.046	48.109	43.259	8:37	44.057
9/24/2006	12:00	51.461	47.865	50.618	50.055	48.234	43.263	12:37	44.342
9/24/2006	16:00	51.464	47.938	50.623	50.057	48.364	43.269	16:37	44.622
9/24/2006	20:00	51.47	47.999	50.656	50.067	48.36	43.282	20:37	44.465
9/25/2006	0:00	51.478	47.989	50.656	50.077	48.251	43.285	0:37	44.361
9/25/2006	4:00	51.48	47.97	50.648	50.085	48.204	43.293	4:37	44.26
9/25/2006	8:00	51.482	47.961	50.654	50.089	48.192	43.311	8:37	44.154
9/25/2006	12:00	51.484	47.936	50.641	50.091	48.167	43.315	12:37	44.202
9/25/2006	16:00	51.47	47.919	50.612	50.087	48.128	43.317	16:37	44.316
9/25/2006	20:00	51.466	47.913	50.618	50.092	48.138	43.332	20:37	44.219
9/26/2006	0:00	51.472	47.909	50.621	50.096	48.138	43.337	0:37	44.178
9/26/2006	4:00	51.472	47.903	50.612	50.096	48.128	43.346	4:37	44.135
9/26/2006	8:00	51.476	47.905	50.62	50.101	48.136	43.356	8:37	44.118
9/26/2006	12:00	51.474	47.893	50.602	50.102	48.118	43.356	12:37	44.436
9/26/2006	16:00	51.451	47.872	50.564	50.089	48.077	43.35	16:37	44.395
9/26/2006	20:00	51.433	47.865	50.556	50.089	48.079	43.356	20:37	44.243
9/27/2006	0:00	51.425	47.855	50.544	50.091	48.071	43.356	0:37	44.173
9/27/2006	4:00	51.421	47.855	50.552	50.094	48.085	43.363	4:37	44.13
9/27/2006	8:00	51.443	47.88	50.591	50.108	48.124	43.384	8:37	44.115
9/27/2006	12:00	51.464	47.888	50.604	50.118	48.14	43.389	12:37	44.12
9/27/2006	16:00	51.466	47.884	50.587	50.12	48.12	43.393	16:37	44.103
9/27/2006	20:00	51.476	47.911	50.621	50.126	48.151	43.417	20:37	44.113
9/28/2006	0:00	51.48	47.926	50.652	50.138	48.185	43.426	0:37	44.127
9/28/2006	4:00	51.502	47.932	50.666	50.144	48.189	43.437	4:37	44.144
9/28/2006	8:00	51.513	47.945	50.682	50.153	48.204	43.45	8:37	44.147
9/28/2006	12:00	51.511	47.949	50.675	50.157	48.193	43.452	12:37	44.154
9/28/2006	16:00	51.49	47.926	50.633	50.148	48.141	43.445	16:37	44.132
9/28/2006	20:00	51.468	47.918	50.616	50.146	48.13	43.45	20:37	44.023
9/29/2006	0:00	51.451	47.897	50.587	50.14	48.107	43.443	0:37	44.086
9/29/2006	4:00	51.423	47.87	50.55	50.132	48.075	43.432	4:37	44.057
9/29/2006	8:00	51.396	47.865	50.539	50.128	48.07	43.439	8:37	44.031

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
9/29/2006	12:00	51.396	47.874	50.56	50.138	48.1	43.441	12:37	44.12
9/29/2006	16:00	51.39	47.867	50.542	50.14	48.089	43.432	16:37	44.101
9/29/2006	20:00	51.39	47.882	50.556	50.148	48.173	43.439	20:37	44.328
9/30/2006	0:00	51.394	47.959	50.583	50.157	48.364	43.45	0:37	44.622
9/30/2006	4:00	51.4	48.041	50.614	50.166	48.471	43.452	4:37	44.791
9/30/2006	8:00	51.423	48.122	50.676	50.185	48.493	43.465	8:37	44.675
9/30/2006	12:00	51.453	48.118	50.704	50.205	48.405	43.471	12:37	44.489
9/30/2006	16:00	51.457	48.087	50.683	50.216	48.327	43.469	16:37	44.383
9/30/2006	20:00	51.457	48.135	50.695	50.222	48.47	43.476	20:37	44.574
10/1/2006	0:00	51.466	48.116	50.704	50.236	48.37	43.478	0:37	44.407
10/1/2006	4:00	51.468	48.099	50.699	50.242	48.325	43.478	4:37	44.328
10/1/2006	8:00	51.468	48.081	50.699	50.25	48.306	43.484	8:37	44.289
10/1/2006	12:00	51.472	48.066	50.691	50.256	48.284	43.482	12:37	44.255
10/1/2006	16:00	51.455	48.045	50.662	50.256	48.261	43.484	16:37	44.301
10/1/2006	20:00	51.451	48.118	50.689	50.262	48.481	43.497	20:37	44.571
10/2/2006	0:00	51.464	48.124	50.714	50.275	48.384	43.491	0:37	44.386
10/2/2006	4:00	51.466	48.108	50.71	50.287	48.337	43.489	4:37	44.313
10/2/2006	8:00	51.472	48.104	50.724	50.295	48.327	43.502	8:37	44.282
10/2/2006	12:00	51.48	48.091	50.728	50.305	48.321	43.502	12:37	44.255
10/2/2006	16:00	51.472	48.064	50.7	50.307	48.282	43.495	16:37	44.221
10/2/2006	20:00	51.47	48.072	50.714	50.315	48.292	43.51	20:37	44.226
10/3/2006	0:00	51.478	48.066	50.72	50.325	48.296	43.506	0:37	44.224
10/3/2006	4:00	51.477	48.058	50.714	50.33	48.28	43.506	4:37	44.197
10/3/2006	8:00	51.476	48.066	50.73	50.338	48.292	43.513	8:37	44.214
10/3/2006	12:00	51.476	48.064	50.73	50.344	48.292	43.513	12:37	44.468
10/3/2006	16:00	51.464	48.051	50.706	50.348	48.271	43.51	16:37	44.436
10/3/2006	20:00	51.464	48.06	50.722	50.356	48.288	43.519	20:37	44.458
10/4/2006	0:00	51.466	48.078	50.755	50.37	48.321	43.521	0:37	44.4
10/4/2006	4:00	51.47	48.095	50.782	50.383	48.349	43.528	4:37	44.364
10/4/2006	8:00	51.482	48.122	50.82	50.401	48.378	43.534	8:37	44.366
10/4/2006	12:00	51.502	48.141	50.853	50.419	48.403	43.539	12:37	44.381
10/4/2006	16:00	51.506	48.133	50.843	50.431	48.376	43.536	16:37	44.364
10/4/2006	20:00	51.509	48.145	50.855	50.444	48.394	43.547	20:37	44.345
10/5/2006	0:00	51.517	48.143	50.791	50.456	48.382	43.543	0:37	44.374
10/5/2006	4:00	51.517	48.143	50.793	50.466	48.38	43.545	4:37	44.359
10/5/2006	8:00	51.522	48.145	50.791	50.476	48.388	43.552	8:37	44.361
10/5/2006	12:00	51.523	48.152	50.785	50.486	48.386	43.552	12:37	44.371
10/5/2006	16:00	51.507	48.122	50.757	50.49	48.343	43.547	16:37	44.345
10/5/2006	20:00	51.5	48.16	50.768	50.494	48.478	43.556	20:37	44.612
10/6/2006	0:00	51.504	48.212	50.78	50.505	48.485	43.556	0:37	44.528
10/6/2006	4:00	51.506	48.2	50.782	50.519	48.446	43.56	4:37	44.444
10/6/2006	8:00	51.509	48.199	50.784	50.531	48.437	43.562	8:37	44.417
10/6/2006	12:00	51.514	48.189	50.778	50.539	48.425	43.567	12:37	44.407
10/6/2006	16:00	51.49	48.158	50.745	50.539	48.368	43.565	16:37	44.472
10/6/2006	20:00	51.476	48.158	50.749	50.543	48.372	43.573	20:37	44.405
10/7/2006	0:00	51.474	48.156	50.751	50.551	48.386	43.571	0:37	44.383
10/7/2006	4:00	51.47	48.152	50.745	50.556	48.376	43.571	4:37	44.345
10/7/2006	8:00	51.468	48.16	50.753	50.562	48.386	43.584	8:37	44.335
10/7/2006	12:00	51.47	48.156	50.747	50.569	48.386	43.58	12:37	44.34
10/7/2006	16:00	51.453	48.189	50.737	50.57	48.444	43.584	16:37	44.468
10/7/2006	20:00	51.447	48.187	50.745	50.574	48.421	43.588	20:37	44.856
10/8/2006	0:00	51.449	48.186	50.751	50.582	48.423	43.588	0:37	44.612
10/8/2006	4:00	51.447	48.185	50.749	50.59	48.411	43.593	4:37	44.504

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
10/8/2006	8:00	51.455	48.197	50.764	50.598	48.433	43.604	8:37	44.46
10/8/2006	12:00	51.461	48.193	50.758	50.608	48.427	43.597	12:37	44.603
10/8/2006	16:00	51.453	48.181	50.745	50.611	48.403	43.604	16:37	44.656
10/8/2006	20:00	51.451	48.184	50.755	50.616	48.415	43.615	20:37	44.728
10/9/2006	0:00	51.461	48.195	50.764	50.626	48.439	43.619	0:37	44.596
10/9/2006	4:00	51.471	48.205	50.77	50.635	48.444	43.621	4:37	44.533
10/9/2006	8:00	51.482	48.218	50.78	50.643	48.46	43.628	8:37	44.501
10/9/2006	12:00	51.492	48.216	50.778	50.655	48.46	43.625	12:37	44.482
10/9/2006	16:00	51.49	48.209	50.764	50.659	48.439	43.63	16:37	44.453
10/9/2006	20:00	51.49	48.208	50.762	50.667	48.458	43.643	20:37	44.451
10/10/2006	0:00	51.492	48.212	50.762	50.672	48.444	43.641	0:37	44.441
10/10/2006	4:00	51.488	48.207	50.76	50.674	48.439	43.643	4:37	44.419
10/10/2006	8:00	51.476	48.202	50.753	50.676	48.421	43.647	8:37	44.393
10/10/2006	12:00	51.459	48.177	50.729	50.672	48.386	43.641	12:37	44.357
10/10/2006	16:00	51.434	48.151	50.71	50.663	48.358	43.643	16:37	44.301
10/10/2006	20:00	51.416	48.141	50.704	50.659	48.347	43.643	20:37	44.262
10/11/2006	0:00	51.402	48.141	50.707	50.657	48.351	43.641	0:37	44.272
10/11/2006	4:00	51.388	48.122	50.697	50.653	48.335	43.636	4:37	44.253
10/11/2006	8:00	51.375	48.135	50.706	50.649	48.345	43.649	8:37	44.243
10/11/2006	12:00	51.38	48.162	50.741	50.659	48.413	43.66	12:37	44.284
10/11/2006	16:00	51.392	48.17	50.749	50.672	48.411	43.658	16:37	44.304
10/11/2006	20:00	51.404	48.193	50.764	50.678	48.429	43.667	20:37	44.306
10/12/2006	0:00	51.41	48.184	50.755	50.684	48.423	43.667	0:37	44.301
10/12/2006	4:00	51.421	48.206	50.774	50.692	48.448	43.675	4:37	44.332
10/12/2006	8:00	51.439	48.227	50.785	50.702	48.472	43.677	8:37	44.354
10/12/2006	12:00	51.447	48.216	50.768	50.708	48.45	43.675	12:37	44.354
10/12/2006	16:00	51.432	48.191	50.745	50.704	48.411	43.675	16:37	44.349
10/12/2006	20:00	51.425	48.193	50.745	50.708	48.417	43.682	20:37	44.335
10/13/2006	0:00	51.431	48.209	50.758	50.712	48.439	43.688	0:37	44.335
10/13/2006	4:00	51.437	48.223	50.764	50.718	48.454	43.688	4:37	44.349
10/13/2006	8:00	51.447	48.23	50.77	50.724	48.464	43.699	8:37	44.361
10/13/2006	12:00	51.461	48.239	50.778	50.737	48.481	43.697	12:37	44.371
10/13/2006	16:00	51.453	48.216	50.754	50.736	48.44	43.699	16:37	44.559
10/13/2006	20:00	51.455	48.32	50.78	50.743	48.692	43.708	20:37	45.088
10/14/2006	0:00	51.467	48.404	50.801	50.757	48.786	43.71	0:37	45.023
10/14/2006	4:00	51.476	48.408	50.809	50.775	48.669	43.708	4:37	44.731
10/14/2006	8:00	51.488	48.397	50.824	50.79	48.645	43.73	8:37	44.69
10/14/2006	12:00	51.498	48.374	50.811	50.802	48.608	43.725	12:37	44.625
10/14/2006	16:00	51.488	48.333	50.782	50.802	48.548	43.725	16:37	44.82
10/14/2006	20:00	51.475	48.314	50.77	50.804	48.53	43.732	20:37	44.644
10/15/2006	0:00	51.459	48.287	50.747	50.804	48.495	43.725	0:37	44.559
10/15/2006	4:00	51.445	48.262	50.731	50.802	48.474	43.734	4:37	44.489
10/15/2006	8:00	51.434	48.268	50.737	50.8	48.483	43.74	8:37	44.456
10/15/2006	12:00	51.432	48.275	50.741	50.806	48.493	43.745	12:37	44.436
10/15/2006	16:00	51.423	48.249	50.724	50.799	48.462	43.743	16:37	44.395
10/15/2006	20:00	51.408	48.253	50.728	50.798	48.462	43.758	20:37	44.388
10/16/2006	0:00	51.4	48.241	50.718	50.796	48.454	43.758	0:37	44.369
10/16/2006	4:00	51.39	48.235	50.718	50.796	48.444	43.751	4:37	44.349
10/16/2006	8:00	51.375	48.216	50.699	50.786	48.423	43.745	8:37	44.33
10/16/2006	12:00	51.363	48.21	50.699	50.781	48.415	43.736	12:37	44.325
10/16/2006	16:00	51.342	48.193	50.687	50.769	48.384	43.749	16:37	44.299
10/16/2006	20:00	51.332	48.203	50.707	50.765	48.407	43.753	20:37	44.287
10/17/2006	0:00	51.33	48.21	50.718	50.765	48.427	43.758	0:37	44.284

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
10/17/2006	4:00	51.339	48.235	50.745	50.773	48.464	43.771	4:37	44.289
10/17/2006	8:00	51.351	48.239	50.747	50.779	48.47	43.766	8:37	44.313
10/17/2006	12:00	51.373	48.264	50.768	50.794	48.507	43.777	12:37	44.352
10/17/2006	16:00	51.379	48.257	50.757	50.798	48.487	43.779	16:37	44.359
10/17/2006	20:00	51.39	48.278	50.776	50.806	48.517	43.786	20:37	44.381
10/18/2006	0:00	51.414	48.306	50.791	50.816	48.544	43.806	0:37	44.405
10/18/2006	4:00	51.434	48.316	50.801	50.824	48.563	43.812	4:37	44.415
10/18/2006	8:00	51.463	48.35	50.828	50.841	48.606	43.832	8:37	44.463
10/18/2006	12:00	51.49	48.364	50.833	50.855	48.614	43.836	12:37	44.494
10/18/2006	16:00	51.504	48.36	50.828	50.859	48.597	43.84	16:37	44.497
10/18/2006	20:00	51.522	48.372	50.839	50.869	48.62	43.855	20:37	44.514
10/19/2006	0:00	51.531	48.369	50.828	50.877	48.606	43.858	0:37	44.511
10/19/2006	4:00	51.535	48.349	50.806	50.879	48.577	43.866	4:37	44.506
10/19/2006	8:00	51.537	48.356	50.812	50.883	48.583	43.875	8:37	44.504
10/19/2006	12:00	51.543	48.354	50.805	50.887	48.579	43.877	12:37	44.504
10/19/2006	16:00	51.521	48.323	50.776	50.879	48.528	43.875	16:37	44.475
10/19/2006	20:00	51.51	48.325	50.78	50.879	48.54	43.888	20:37	44.465
10/20/2006	0:00	51.509	48.327	50.776	50.883	48.554	43.886	0:37	44.46
10/20/2006	4:00	51.502	48.316	50.762	50.883	48.538	43.888	4:37	44.439
10/20/2006	8:00	51.496	48.322	50.764	50.883	48.54	43.895	8:37	44.441
10/20/2006	12:00	51.486	48.303	50.747	50.881	48.519	43.892	12:37	44.434
10/20/2006	16:00	51.463	48.287	50.729	50.871	48.485	43.89	16:37	44.516
10/20/2006	20:00	51.453	48.301	50.747	50.869	48.519	43.899	20:37	44.468
10/21/2006	0:00	51.457	48.306	50.755	50.875	48.538	43.901	0:37	44.419
10/21/2006	4:00	51.465	48.324	50.766	50.881	48.56	43.905	4:37	44.451
10/21/2006	8:00	51.48	48.362	50.801	50.891	48.601	43.923	8:37	44.463
10/21/2006	12:00	51.519	48.393	50.824	50.906	48.661	43.934	12:37	44.509
10/21/2006	16:00	51.549	48.418	50.839	50.918	48.675	43.944	16:37	44.545
10/21/2006	20:00	51.576	48.437	50.851	50.93	48.692	43.947	20:37	44.567
10/22/2006	0:00	51.604	48.445	50.857	50.942	48.7	43.957	0:37	44.593
10/22/2006	4:00	51.631	48.45	50.862	50.952	48.694	43.955	4:37	44.593
10/22/2006	8:00	51.654	48.46	50.87	50.961	48.698	43.97	8:37	44.608
10/22/2006	12:00	51.674	48.458	50.866	50.971	48.696	43.975	12:37	44.617
10/22/2006	16:00	51.683	48.44	50.845	50.971	48.657	43.984	16:37	44.603
10/22/2006	20:00	51.695	48.442	50.847	50.975	48.671	43.994	20:37	44.603
10/23/2006	0:00	51.703	48.441	50.845	50.979	48.669	43.999	0:37	44.6
10/23/2006	4:00	51.711	48.445	50.845	50.985	48.677	44.003	4:37	44.598
10/23/2006	8:00	51.721	48.454	50.847	50.989	48.683	44.012	8:37	44.581
10/23/2006	12:00	51.728	48.452	50.843	50.995	48.683	44.014	12:37	44.629
10/23/2006	16:00	51.731	48.437	50.824	50.993	48.657	44.018	16:37	44.62
10/23/2006	20:00	51.734	48.437	50.83	50.997	48.669	44.027	20:37	44.608
10/24/2006	0:00	51.736	48.44	50.822	50.999	48.669	44.027	0:37	44.603
10/24/2006	4:00	51.737	48.438	50.818	51.001	48.665	44.023	4:37	44.547
10/24/2006	8:00	51.737	48.435	50.815	51.003	48.663	44.033	8:37	44.584
10/24/2006	12:00	51.733	48.425	50.795	51.003	48.638	44.027	12:37	44.576
10/24/2006	16:00	51.717	48.4	50.779	50.993	48.601	44.027	16:37	44.542
10/24/2006	20:00	51.701	48.4	50.783	50.991	48.618	44.04	20:37	44.535
10/25/2006	0:00	51.684	48.393	50.77	50.989	48.613	44.029	0:37	44.54
10/25/2006	4:00	51.668	48.4	50.772	50.989	48.618	44.036	4:37	44.492
10/25/2006	8:00	51.654	48.4	50.774	50.987	48.616	44.04	8:37	44.504
10/25/2006	12:00	51.643	48.4	50.77	50.989	48.622	44.042	12:37	44.506
10/25/2006	16:00	51.625	48.391	50.754	50.983	48.599	44.038	16:37	44.485
10/25/2006	20:00	51.607	48.395	50.766	50.981	48.611	44.049	20:37	44.475

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
10/26/2006	0:00	51.599	48.41	50.778	50.985	48.638	44.049	0:37	44.492
10/26/2006	4:00	51.59	48.408	50.774	50.987	48.632	44.053	4:37	44.489
10/26/2006	8:00	51.584	48.427	50.789	50.991	48.657	44.057	8:37	44.492
10/26/2006	12:00	51.582	48.425	50.785	50.995	48.653	44.059	12:37	44.509
10/26/2006	16:00	51.578	48.431	50.784	50.995	48.643	44.062	16:37	44.509
10/26/2006	20:00	51.578	48.443	50.801	51.003	48.665	44.066	20:37	44.518
10/27/2006	0:00	51.586	48.485	50.847	51.009	48.722	44.079	0:37	44.509
10/27/2006	4:00	51.604	48.467	50.822	51.014	48.695	44.053	4:37	44.4
10/27/2006	8:00	51.625	48.483	50.845	51.024	48.729	44.04	8:37	44.436
10/27/2006	12:00	51.653	48.5	50.851	51.034	48.747	44.062	12:37	44.492
10/27/2006	16:00	51.67	48.498	50.839	51.036	48.72	44.081	16:37	44.511
10/27/2006	20:00	51.686	48.496	50.847	51.042	48.728	44.096	20:37	44.535
10/28/2006	0:00	51.703	48.512	50.857	51.05	48.751	44.109	0:37	44.562
10/28/2006	4:00	51.719	48.517	50.861	51.056	48.755	44.109	4:37	44.581
10/28/2006	8:00	51.732	48.519	50.855	51.06	48.741	44.114	8:37	44.581
10/28/2006	12:00	51.742	48.506	50.843	51.062	48.729	44.116	12:37	44.581
10/28/2006	16:00	51.744	48.48	50.816	51.056	48.681	44.112	16:37	44.581
10/28/2006	20:00	51.744	48.469	50.816	51.052	48.686	44.122	20:37	44.567
10/29/2006	0:00	51.744	48.468	50.815	51.054	48.693	44.122	0:37	44.564
10/29/2006	4:00	51.742	48.467	50.809	51.056	48.693	44.122	4:37	44.562
10/29/2006	8:00	51.742	48.475	50.809	51.058	48.699	44.127	8:37	44.535
10/29/2006	12:00	51.739	48.479	50.811	51.06	48.699	44.127	12:37	44.559
10/29/2006	16:00	51.729	48.448	50.788	51.052	48.659	44.12	16:37	44.632
10/29/2006	20:00	51.713	48.445	50.785	51.046	48.656	44.125	20:37	44.569
10/30/2006	0:00	51.697	48.429	50.77	51.044	48.645	44.114	0:37	44.535
10/30/2006	4:00	51.672	48.412	50.751	51.03	48.61	44.107	4:37	44.497
10/30/2006	8:00	51.645	48.406	50.758	51.024	48.62	44.112	8:37	44.48
10/30/2006	12:00	51.625	48.412	50.758	51.024	48.636	44.109	12:37	44.477
10/30/2006	16:00	51.611	48.448	50.801	51.03	48.692	44.129	16:37	44.482
10/30/2006	20:00	51.629	48.523	50.864	51.058	48.816	44.157	20:37	44.586
10/31/2006	0:00	51.67	48.556	50.872	51.081	48.848	44.155	0:37	44.656
10/31/2006	4:00	51.705	48.59	50.888	51.093	48.851	44.162	4:37	44.685
10/31/2006	8:00	51.735	48.613	50.901	51.107	48.864	44.177	8:37	44.716
10/31/2006	12:00	51.764	48.615	50.899	51.117	48.858	44.179	12:37	44.731
10/31/2006	16:00	51.785	48.594	50.876	51.117	48.804	44.183	16:37	44.697
10/31/2006	20:00	51.805	48.585	50.886	51.121	48.813	44.192	20:37	44.714
11/1/2006	0:00	51.825	48.594	50.891	51.128	48.827	44.194	0:37	44.709
11/1/2006	4:00	51.844	48.601	50.893	51.134	48.835	44.203	4:37	44.709
11/1/2006	8:00	51.868	48.617	50.914	51.146	48.86	44.222	8:37	44.736
11/1/2006	12:00	51.893	48.629	50.918	51.156	48.882	44.24	12:37	44.757
11/1/2006	16:00	51.913	48.625	50.905	51.16	48.853	44.248	16:37	44.743
11/1/2006	20:00	51.938	48.636	50.92	51.166	48.878	44.259	20:37	44.757
11/2/2006	0:00	51.959	48.646	50.928	51.176	48.892	44.272	0:37	44.769
11/2/2006	4:00	51.979	48.648	50.918	51.182	48.884	44.277	4:37	44.765
11/2/2006	8:00	51.997	48.652	50.926	51.189	48.907	44.279	8:37	44.774
11/2/2006	12:00	52.016	48.661	50.926	51.199	48.897	44.283	12:37	44.789
11/2/2006	16:00	52.032	48.644	50.907	51.199	48.857	44.285	16:37	44.774
11/2/2006	20:00	52.046	48.633	50.909	51.199	48.862	44.292	20:37	44.772
11/3/2006	0:00	52.057	48.633	50.903	51.203	48.868	44.29	0:37	44.762
11/3/2006	4:00	52.065	48.636	50.901	51.205	48.861	44.292	4:37	44.745
11/3/2006	8:00	52.073	48.631	50.899	51.207	48.866	44.294	8:37	44.719
11/3/2006	12:00	52.079	48.617	50.878	51.205	48.835	44.29	12:37	44.803
11/3/2006	16:00		48.594	50.938	51.193	48.784	44.285	16:37	44.813

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
11/3/2006	20:00		48.592	50.88	51.191	48.808	44.296	20:37	44.76
11/4/2006	0:00		48.594	50.874	51.191	48.815	44.294	0:37	44.748
11/4/2006	4:00		48.585	50.864	51.189	48.8	44.294	4:37	44.719
11/4/2006	8:00		48.6	50.876	51.191	48.821	44.296	8:37	44.709
11/4/2006	12:00		48.606	50.878	51.195	48.837	44.298	12:37	44.714
11/4/2006	16:00		48.608	50.87	51.195	48.817	44.296	16:37	44.692
11/4/2006	20:00		48.621	50.885	51.201	48.859	44.3	20:37	44.719
11/5/2006	0:00		48.631	50.884	51.207	48.864	44.305	0:37	44.709
11/5/2006	4:00		48.638	50.884	51.211	48.859	44.305	4:37	44.716
11/5/2006	8:00		48.644	50.892	51.215	48.866	44.309	8:37	44.716
11/5/2006	12:00		48.648	50.891	51.217	48.878	44.309	12:37	44.731
11/5/2006	16:00		48.677	50.87	51.215	49.044	44.303	16:37	45.091
11/5/2006	20:00		48.759	50.874	51.221	49.085	44.307	20:37	45.083
11/6/2006	0:00		48.776	50.874	51.227	49.003	44.307	0:37	44.946
11/6/2006	4:00		48.75	50.865	51.231	48.954	44.309	4:37	44.868
11/6/2006	8:00		48.74	50.876	51.239	48.952	44.307	8:37	44.823
11/6/2006	12:00		48.725	50.874	51.246	48.937	44.316	12:37	44.82
11/6/2006	16:00		48.702	50.864	51.246	48.905	44.316	16:37	44.731
11/6/2006	20:00		48.696	50.868	51.248	48.903	44.322	20:37	44.769
11/7/2006	0:00		48.694	50.872	51.252	48.915	44.32	0:37	44.765
11/7/2006	4:00		48.684	50.861	51.254	48.892	44.322	4:37	44.743
11/7/2006	8:00		48.686	50.87	51.25	48.874	44.322	8:37	44.716
11/7/2006	12:00		48.648	50.837	51.248	48.863	44.32	12:37	44.707
11/7/2006	16:00		48.638	50.832	51.241	48.835	44.311	16:37	44.666
11/7/2006	20:00		48.638	50.836	51.237	48.847	44.309	20:37	44.675
11/8/2006	0:00		48.633	50.832	51.235	48.843	44.307	0:37	44.639
11/8/2006	4:00		48.621	50.82	51.229	48.825	44.3	4:37	44.649
11/8/2006	8:00		48.613	50.822	51.225	48.822	44.296	8:37	44.634
11/8/2006	12:00		48.615	50.82	51.223	48.831	44.292	12:37	44.639
11/8/2006	16:00		48.604	50.808	51.215	48.806	44.285	16:37	44.622
11/8/2006	20:00		48.615	50.828	51.217	48.833	44.287	20:37	44.622
11/9/2006	0:00		48.619	50.833	51.221	48.853	44.287	0:37	44.634
11/9/2006	4:00		48.642	50.849	51.227	48.872	44.294	4:37	44.605
11/9/2006	8:00		48.652	50.855	51.235	48.886	44.3	8:37	44.656
11/9/2006	12:00		48.661	50.853	51.241	48.888	44.3	12:37	44.67
11/9/2006	16:00		48.65	50.837	51.237	48.853	44.298	16:37	44.825
11/9/2006	20:00		48.656	50.853	51.241	48.878	44.307	20:37	44.767
11/10/2006	0:00		48.663	50.857	51.244	48.882	44.307	0:37	44.748
11/10/2006	4:00		48.692	50.891	51.256	48.933	44.318	4:37	44.757
11/10/2006	8:00		48.723	50.911	51.268	48.966	44.324	8:37	44.772
11/10/2006	12:00		48.75	50.928	51.282	49.009	44.335	12:37	44.813
11/10/2006	16:00		48.778	50.943	51.294	49.023	44.342	16:37	44.844
11/10/2006	20:00		48.813	50.97	51.315	49.075	44.353	20:37	44.888
11/11/2006	0:00		48.826	50.966	51.331	49.073	44.359	0:37	44.919
11/11/2006	4:00		48.83	50.972	51.337	49.056	44.361	4:37	44.926
11/11/2006	8:00		48.821	50.972	51.343	49.048	44.368	8:37	44.926
11/11/2006	12:00		48.815	50.959	51.349	49.032	44.368	12:37	44.931
11/11/2006	16:00		48.78	50.926	51.339	48.97	44.366	16:37	44.893
11/11/2006	20:00		48.763	50.916	51.333	49.093	44.368	20:37	45.136
11/12/2006	0:00		48.834	50.912	51.331	49.243	44.372	0:37	45.38
11/12/2006	4:00		48.886	50.899	51.335	49.321	44.37	4:37	45.523
11/12/2006	8:00		48.928	50.899	51.341	49.386	44.372	8:37	45.605
11/12/2006	12:00		48.955	50.893	51.349	49.434	44.374	12:37	45.68

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
11/12/2006	16:00		48.987	50.884	51.351	49.452	44.372	16:37	45.713
11/12/2006	20:00		49.03	50.916	51.364	49.559	44.383	20:37	45.808
11/13/2006	0:00		49.072	50.92	51.378	49.403	44.389	0:37	45.455
11/13/2006	4:00		49.099	50.936	51.394	49.341	44.389	4:37	45.308
11/13/2006	8:00		49.087	50.951	51.404	49.294	44.396	8:37	45.218
11/13/2006	12:00		49.053	50.924	51.412	49.231	44.385	12:37	45.144
11/13/2006	16:00		49.02	50.895	51.404	49.136	44.387	16:37	45.056
11/13/2006	20:00		49.014	50.895	51.402	49.122	44.387	20:37	45.013
11/14/2006	0:00		48.993	50.899	51.406	49.124	44.385	0:37	44.979
11/14/2006	4:00		48.951	50.878	51.4	49.069	44.387	4:37	44.931
11/14/2006	8:00		48.915	50.866	51.394	49.046	44.387	8:37	44.899
11/14/2006	12:00		48.865	50.837	51.388	49.017	44.381	12:37	44.866
11/14/2006	16:00		48.842	50.843	51.376	48.997	44.381	16:37	44.818
11/14/2006	20:00		48.828	50.864	51.378	49.034	44.383	20:37	44.88
11/15/2006	0:00		48.832	50.878	51.386	49.064	44.389	0:37	44.842
11/15/2006	4:00		48.851	50.897	51.392	49.073	44.396	4:37	44.856
11/15/2006	8:00		48.88	50.941	51.412	49.149	44.405	8:37	44.895
11/15/2006	12:00		48.886	50.941	51.427	49.165	44.4	12:37	44.926
11/15/2006	16:00		48.901	50.939	51.429	49.142	44.402	16:37	44.926
11/15/2006	20:00		48.913	50.949	51.437	49.153	44.407	20:37	44.943
11/16/2006	0:00		48.92	50.953	51.441	49.148	44.409	0:37	44.95
11/16/2006	4:00		48.92	50.945	51.441	49.122	44.409	4:37	44.936
11/16/2006	8:00		48.922	50.947	51.445	49.126	44.413	8:37	44.943
11/16/2006	12:00		48.913	50.943	51.445	49.12	44.411	12:37	44.945
11/16/2006	16:00		48.895	50.911	51.437	49.066	44.409	16:37	44.909
11/16/2006	20:00		48.888	50.914	51.433	49.069	44.411	20:37	44.904
11/17/2006	0:00		48.874	50.909	51.431	49.069	44.411	0:37	44.895
11/17/2006	4:00		48.878	50.926	51.433	49.087	44.413	4:37	44.885
11/17/2006	8:00		48.886	50.945	51.439	49.122	44.424	8:37	44.907
11/17/2006	12:00		48.897	50.959	51.449	49.157	44.426	12:37	44.917
11/17/2006	16:00		48.905	50.961	51.455	49.151	44.431	16:37	44.95
11/17/2006	20:00		48.924	50.986	51.463	49.194	44.435	20:37	45.006
11/18/2006	0:00		48.932	50.991	51.472	49.21	44.435	0:37	45.023
11/18/2006	4:00		48.947	51.001	51.48	49.206	44.442	4:37	45.025
11/18/2006	8:00		48.957	51.005	51.486	49.208	44.446	8:37	45.035
11/18/2006	12:00		48.959	51.001	51.49	49.22	44.446	12:37	45.049
11/18/2006	16:00		48.966	50.99	51.49	49.181	44.448	16:37	45.042
11/18/2006	20:00		48.974	51.009	51.494	49.208	44.452	20:37	45.054
11/19/2006	0:00		48.976	51.018	51.5	49.224	44.457	0:37	45.073
11/19/2006	4:00		48.987	51.03	51.504	49.233	44.463	4:37	45.074
11/19/2006	8:00		48.993	51.034	51.51	49.235	44.468	8:37	45.081
11/19/2006	12:00		48.995	51.032	51.516	49.239	44.468	12:37	45.098
11/19/2006	16:00		48.993	51.005	51.512	49.306	44.468	16:37	45.303
11/19/2006	20:00		49.018	51.018	51.518	49.493	44.468	20:37	45.515
11/20/2006	0:00		49.066	51.038	51.529	49.397	44.476	0:37	45.337
11/20/2006	4:00		49.089	51.044	51.537	49.358	44.478	4:37	45.254
11/20/2006	8:00		49.083	51.028	51.545	49.315	44.478	8:37	45.213
11/20/2006	12:00		49.085	51.032	51.547	49.31	44.481	12:37	45.192
11/20/2006	16:00		49.045	50.997	51.541	49.239	44.481	16:37	45.141
11/20/2006	20:00		49.039	50.993	51.539	49.231	44.478	20:37	45.11
11/21/2006	0:00		49.039	50.99	51.537	49.233	44.481	0:37	45.095
11/21/2006	4:00		49.022	50.966	51.531	49.196	44.478	4:37	45.052
11/21/2006	8:00		49.022	50.968	51.529	49.196	44.481	8:37	45.028

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
11/21/2006	12:00		49.016	50.968	51.531	49.208	44.481	12:37	45.028
11/21/2006	16:00		49.005	50.957	51.526	49.183	44.483	16:37	45.013
11/21/2006	20:00		49.003	50.966	51.531	49.212	44.483	20:37	45.02
11/22/2006	0:00		48.997	50.961	51.531	49.208	44.483	0:37	45.025
11/22/2006	4:00		48.993	50.951	51.529	49.192	44.483	4:37	45.004
11/22/2006	8:00		48.993	50.961	51.533	49.208	44.485	8:37	44.991
11/22/2006	12:00		48.993	50.959	51.537	49.22	44.485	12:37	45.247
11/22/2006	16:00		48.991	50.951	51.535	49.2	44.49	16:37	45.175
11/22/2006	20:00		48.997	50.968	51.541	49.231	44.491	20:37	45.132
11/23/2006	0:00		49.001	50.966	51.545	49.239	44.49	0:37	45.107
11/23/2006	4:00		49.001	50.959	51.545	49.228	44.491	4:37	45.076
11/23/2006	8:00		49.007	50.966	51.545	49.228	44.494	8:37	45.057
11/23/2006	12:00		49.005	50.953	51.545	49.384	44.492	12:37	45.358
11/23/2006	16:00		49.024	50.938	51.539	49.487	44.489	16:37	45.58
11/23/2006	20:00		49.087	50.941	51.543	49.587	44.491	20:37	45.721
11/24/2006	0:00		49.164	50.945	51.549	49.665	44.494	0:37	45.832
11/24/2006	4:00		49.233	50.951	51.557	49.714	44.501	4:37	45.904
11/24/2006	8:00		49.331	50.97	51.569	49.798	44.5	8:37	45.969
11/24/2006	12:00		49.377	50.976	51.585	49.681	44.5	12:37	45.68
11/24/2006	16:00		49.319	50.968	51.59	49.55	44.505	16:37	45.662
11/24/2006	20:00		49.31	50.982	51.6	49.519	44.507	20:37	45.479
11/25/2006	0:00		49.264	50.98	51.604	49.47	44.509	0:37	45.385
11/25/2006	4:00		49.241	50.99	51.61	49.454	44.509	4:37	45.317
11/25/2006	8:00		49.231	50.995	51.614	49.445	44.507	8:37	45.274
11/25/2006	12:00		49.21	50.986	51.62	49.421	44.52	12:37	45.25
11/25/2006	16:00		49.149	50.963	51.614	49.367	44.513	16:37	45.218
11/25/2006	20:00		49.156	50.98	51.614	49.382	44.518	20:37	45.182
11/26/2006	0:00		49.154	50.978	51.62	49.386	44.52	0:37	45.179
11/26/2006	4:00		49.149	50.978	51.62	49.374	44.524	4:37	45.16
11/26/2006	8:00		49.141	50.982	51.62	49.372	44.524	8:37	45.151
11/26/2006	12:00		49.143	50.984	51.624	49.374	44.527	12:37	45.153
11/26/2006	16:00		49.129	50.982	51.624	49.363	44.527	16:37	45.177
11/26/2006	20:00		49.162	51.009	51.62	49.398	44.535	20:37	45.172
11/27/2006	0:00		49.198	51.02	51.632	49.427	44.535	0:37	45.187
11/27/2006	4:00		49.181	51.018	51.636	49.409	44.535	4:37	45.184
11/27/2006	8:00		49.168	51.018	51.638	49.408	44.542	8:37	45.18
11/27/2006	12:00		49.16	51.009	51.64	49.388	44.542	12:37	45.167
11/27/2006	16:00		49.101	50.976	51.628	49.329	44.54	16:37	45.136
11/27/2006	20:00		49.097	50.968	51.624	49.326	44.542	20:37	45.122
11/28/2006	0:00		49.072	50.951	51.616	49.298	44.542	0:37	45.095
11/28/2006	4:00		49.066	50.949	51.61	49.29	44.54	4:37	45.068
11/28/2006	8:00		49.062	50.947	51.602	49.288	44.546	8:37	45.054
11/28/2006	12:00		49.068	50.943	51.602	49.302	44.546	12:37	45.054
11/28/2006	16:00		49.058	50.936	51.6	49.285	44.542	16:37	45.042
11/28/2006	20:00		49.106	50.984	51.606	49.347	44.555	20:37	45.071
11/29/2006	0:00		49.131	50.984	51.618	49.376	44.55	0:37	45.093
11/29/2006	4:00		49.164	51.011	51.632	49.409	44.557	4:37	45.117
11/29/2006	8:00		49.187	51.03	51.642	49.431	44.559	8:37	45.146
11/29/2006	12:00		49.2	51.022	51.649	49.433	44.561	12:37	45.17
11/29/2006	16:00		49.187	51.042	51.655	49.419	44.559	16:37	45.182
11/29/2006	20:00		49.229	51.069	51.659	49.464	44.57	20:37	45.206
11/30/2006	0:00		49.246	51.072	51.669	49.47	44.572	0:37	45.228
11/30/2006	4:00		49.229	51.071	51.671	49.454	44.57	4:37	45.231

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
11/30/2006	8:00		49.231	51.072	51.673	49.452	44.579	8:37	45.245
11/30/2006	12:00		49.231	51.072	51.677	49.454	44.574	12:37	45.245
11/30/2006	16:00		49.143	51.024	51.663	49.372	44.574	16:37	45.204
11/30/2006	20:00		49.133	51.022	51.659	49.37	44.585	20:37	45.192
12/1/2006	0:00		49.135	51.024	51.655	49.378	44.587	0:37	45.185
12/1/2006	4:00		49.156	51.028	51.659	49.396	44.587	4:37	45.179
12/1/2006	8:00		49.166	51.042	51.665	49.417	44.594	8:37	45.184
12/1/2006	12:00		49.199	51.053	51.671	49.439	44.598	12:37	45.214
12/1/2006	16:00		49.185	51.049	51.675	49.427	44.6	16:37	45.223
12/1/2006	20:00		49.22	51.072	51.679	49.466	44.603	20:37	45.238
12/2/2006	0:00		49.252	51.088	51.687	49.491	44.609	0:37	45.264
12/2/2006	4:00		49.26	51.096	51.693	49.49	44.611	4:37	45.262
12/2/2006	8:00		49.266	51.107	51.697	49.499	44.613	8:37	45.281
12/2/2006	12:00		49.317	51.134	51.71	49.546	44.618	12:37	45.317
12/2/2006	16:00		49.294	51.123	51.712	49.515	44.623	16:37	45.303
12/2/2006	20:00		49.308	51.14	51.72	49.532	44.63	20:37	45.349
12/3/2006	0:00		49.335	51.161	51.728	49.56	44.632	0:37	45.37
12/3/2006	4:00		49.34	51.169	51.734	49.562	44.637	4:37	45.371
12/3/2006	8:00		49.344	51.178	51.74	49.568	44.65	8:37	45.38
12/3/2006	12:00		49.35	51.178	51.746	49.573	44.653	12:37	45.392
12/3/2006	16:00		49.277	51.142	51.74	49.513	44.655	16:37	45.366
12/3/2006	20:00		49.257	51.126	51.732	49.495	44.653	20:37	45.351
12/4/2006	0:00		49.241	51.115	51.73	49.484	44.638	0:37	45.337
12/4/2006	4:00		49.204	51.094	51.718	49.454	44.653	4:37	45.298
12/4/2006	8:00		49.204	51.088	51.714	49.46	44.642	8:37	45.281
12/4/2006	12:00		49.223	51.078	51.714	49.47	44.657	12:37	45.274
12/4/2006	16:00		49.187	51.065	51.708	49.445	44.659	16:37	45.252
12/4/2006	20:00		49.22	51.076	51.71	49.474	44.66	20:37	45.221
12/5/2006	0:00		49.226	51.067	51.712	49.478	44.659	0:37	45.271
12/5/2006	4:00		49.21	51.053	51.71	49.456	44.657	4:37	45.25
12/5/2006	8:00		49.185	51.044	51.702	49.437	44.655	8:37	45.228
12/5/2006	12:00		49.177	51.024	51.697	49.425	44.651	12:37	45.206
12/5/2006	16:00		49.12	51.001	51.683	49.38	44.653	16:37	45.315
12/5/2006	20:00		49.158	51.011	51.681	49.415	44.662	20:37	45.259
12/6/2006	0:00		49.218	51.044	51.687	49.474	44.66	0:37	45.254
12/6/2006	4:00		49.262	51.055	51.699	49.507	44.667	4:37	45.247
12/6/2006	8:00		49.292	51.078	51.71	49.532	44.668	8:37	45.272
12/6/2006	12:00		49.327	51.084	51.722	49.583	44.678	12:37	45.295
12/6/2006	16:00		49.283	51.067	51.722	49.525	44.686	16:37	45.291
12/6/2006	20:00		49.306	51.094	51.728	49.546		20:37	45.298
12/7/2006	0:00		49.394	51.151	51.748	49.632		0:37	45.349
12/7/2006	4:00		49.468	51.19	51.767	49.693		4:37	45.419
12/7/2006	8:00		49.486	51.211	51.781	49.698		8:37	45.45
12/7/2006	12:00		49.486	51.207	51.793	49.689		12:37	45.472
12/7/2006	16:00		49.411	51.177	51.789	49.622		16:37	45.457
12/7/2006	20:00		49.372	51.173	51.783	49.601		20:37	45.436
12/8/2006	0:00		49.347	51.159	51.779	49.585		0:37	45.424
12/8/2006	4:00		49.317	51.142	51.773	49.562		4:37	45.4
12/8/2006	8:00		49.28	51.119	51.763	49.531		8:37	45.363
12/8/2006	12:00		49.277	51.107	51.756	49.529		12:37	45.348
12/8/2006	16:00		49.235	51.078	51.746	49.558		16:37	45.472
12/8/2006	20:00		49.312	51.08	51.742	49.685		20:37	45.554
12/9/2006	0:00		49.329	51.072	51.74	49.611		0:37	45.441

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
12/9/2006	4:00		49.318	51.059	51.738	49.575		4:37	45.383
12/9/2006	8:00		49.312	51.057	51.738	49.564		8:37	45.339
12/9/2006	12:00		49.346	51.053	51.74	49.775		12:37	45.716
12/9/2006	16:00		49.364	51.036	51.738	49.858		16:37	45.904
12/9/2006	20:00		49.427	51.045	51.744	49.843		20:37	45.754
12/10/2006	0:00		49.448	51.047	51.752	49.749		0:37	45.59
12/10/2006	4:00		49.436	51.042	51.756	49.696		4:37	45.499
12/10/2006	8:00		49.42	51.042	51.761	49.671		8:37	45.443
12/10/2006	12:00		49.429	51.044	51.769	49.665		12:37	45.416
12/10/2006	16:00		49.379	51.032	51.765	49.62		16:37	45.38
12/10/2006	20:00		49.385	51.034	51.769	49.624		20:37	45.361
12/11/2006	0:00		49.389	51.038	51.771	49.624		0:37	45.356
12/11/2006	4:00		49.364	51.024	51.773	49.599		4:37	45.32
12/11/2006	8:00		49.354	51.028	51.771	49.599		8:37	45.315
12/11/2006	12:00		49.365	51.026	51.775	49.599		12:37	45.303
12/11/2006	16:00		49.324	51.026	51.767	49.575		16:37	45.262
12/11/2006	20:00		49.356	51.036	51.771	49.599		20:37	45.295
12/12/2006	0:00		49.379	51.051	51.777	49.618		0:37	45.313
12/12/2006	4:00		49.418	51.074	51.789	49.652		4:37	45.342
12/12/2006	8:00		49.431	51.082	51.799	49.663		8:37	45.293
12/12/2006	12:00		49.437	51.088	51.805	49.661		12:37	45.361
12/12/2006	16:00		49.385	51.071	51.799	49.622		16:37	45.358
12/12/2006	20:00		49.404	51.088	51.805	49.646		20:37	45.368
12/13/2006	0:00		49.42	51.097	51.811	49.654		0:37	45.371
12/13/2006	4:00		49.406	51.101	51.813	49.65		4:37	45.371
12/13/2006	8:00		49.418	51.109	51.818	49.661		8:37	45.378
12/13/2006	12:00		49.435	51.111	51.824	49.667		12:37	45.366
12/13/2006	16:00		49.366	51.069	51.813	49.607		16:37	45.363
12/13/2006	20:00		49.352	51.071	51.807	49.605		20:37	45.354
12/14/2006	0:00		49.354	51.071	51.803	49.609		0:37	45.346
12/14/2006	4:00		49.331	51.042	51.797	49.581		4:37	45.317
12/14/2006	8:00		49.335	51.051	51.791	49.599		8:37	45.315
12/14/2006	12:00		49.395	51.074	51.803	49.64		12:37	45.342
12/14/2006	16:00		49.368	51.071	51.803	49.62		16:37	45.346
12/14/2006	20:00		49.367	51.067	51.803	49.623		20:37	45.344
12/15/2006	0:00		49.404	51.105	51.811	49.66		0:37	45.361
12/15/2006	4:00		49.414	51.086	51.82	49.655		4:37	45.361
12/15/2006	8:00		49.41	51.086	51.824	49.655		8:37	45.363
12/15/2006	12:00		49.386	51.063	51.824	49.629		12:37	45.363
12/15/2006	16:00		49.346	51.051	51.813	49.599		16:37	45.339
12/15/2006	20:00		49.339	51.04	51.807	49.595		20:37	45.38
12/16/2006	0:00		49.347	51.044	51.805	49.601		0:37	45.349
12/16/2006	4:00		49.316	51.02	51.799	49.575		4:37	45.32
12/16/2006	8:00		49.322	51.026	51.797	49.588		8:37	45.31
12/16/2006	12:00		49.374	51.034	51.801	49.778		12:37	45.631
12/16/2006	16:00		49.45	51.067	51.813	49.956		16:37	45.889
12/16/2006	20:00		49.558	51.101	51.834	49.964		20:37	45.773
12/17/2006	0:00		49.606	51.124	51.854	49.908		0:37	45.689
12/17/2006	4:00		49.602	51.134	51.864	49.861		4:37	45.629
12/17/2006	8:00		49.598	51.142	51.875	49.835		8:37	45.593
12/17/2006	12:00		49.592	51.148	51.883	49.82		12:37	45.585
12/17/2006	16:00		49.565	51.146	51.887	49.794		16:37	45.551
12/17/2006	20:00		49.602	51.178	51.899	49.827		20:37	45.583

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
12/18/2006	0:00		49.619	51.194	51.913	49.843		0:37	45.597
12/18/2006	4:00		49.619	51.205	51.921	49.839		4:37	45.597
12/18/2006	8:00		49.627	51.219	51.932	49.853		8:37	45.607
12/18/2006	12:00		49.642	51.23	51.944	49.863		12:37	45.626
12/18/2006	16:00		49.6	51.219	51.94	49.823		16:37	45.607
12/18/2006	20:00		49.608	51.234	51.946	49.837		20:37	45.585
12/19/2006	0:00		49.619	51.227	51.952	49.845		0:37	45.639
12/19/2006	4:00		49.596	51.223	51.952	49.827		4:37	45.617
12/19/2006	8:00		49.583	51.213	51.95	49.816		8:37	45.602
12/19/2006	12:00		49.567	51.202	51.946	49.804		12:37	45.6
12/19/2006	16:00		49.51	51.169	51.927	49.767		16:37	45.556
12/19/2006	20:00		49.508	51.177	51.919	49.759		20:37	45.542
12/20/2006	0:00		49.477	51.142	51.907	49.728		0:37	45.52
12/20/2006	4:00		49.437	51.111	51.891	49.689		4:37	45.443
12/20/2006	8:00		49.4	51.094	51.877	49.668		8:37	45.397
12/20/2006	12:00		49.404	51.076	51.87	49.673		12:37	45.344
12/20/2006	16:00		49.385	51.078	51.86	49.662		16:37	45.334
12/20/2006	20:00		49.429	51.088	51.862	49.705		20:37	45.358
12/21/2006	0:00		49.46	51.096	51.868	49.73		0:37	45.383
12/21/2006	4:00		49.467	51.103	51.877	49.734		4:37	45.385
12/21/2006	8:00		49.477	51.109	51.881	49.742		8:37	45.4
12/21/2006	12:00		49.491	51.109	51.891	49.751		12:37	45.421
12/21/2006	16:00		49.46	51.101	51.887	49.728		16:37	45.412
12/21/2006	20:00		49.483	51.103	51.893	49.742		20:37	45.414
12/22/2006	0:00		49.485	51.107	51.899	49.75		0:37	45.433
12/22/2006	4:00		49.496	51.128	51.905	49.771		4:37	45.435
12/22/2006	8:00		49.523	51.134	51.913	49.785		8:37	45.453
12/22/2006	12:00		49.548	51.146	51.925	49.806		12:37	45.464
12/22/2006	16:00		49.546	51.157	51.932	49.804		16:37	45.491
12/22/2006	20:00		49.569	51.171	51.944	49.826		20:37	45.515
12/23/2006	0:00		49.579	51.177	51.95	49.83		0:37	45.537
12/23/2006	4:00		49.602	51.202	51.96	49.853		4:37	45.559
12/23/2006	8:00		49.613	51.209	51.97	49.863		8:37	45.522
12/23/2006	12:00		49.634	51.211	51.98	49.876		12:37	45.592
12/23/2006	16:00		49.588	51.2	51.974	49.835		16:37	45.595
12/23/2006	20:00		49.594	51.2	51.974	49.841		20:37	45.634
12/24/2006	0:00		49.603	51.213	51.976	49.853		0:37	45.621
12/24/2006	4:00		49.59	51.205	51.976	49.843		4:37	45.602
12/24/2006	8:00		49.558	51.192	51.968	49.82		8:37	45.573
12/24/2006	12:00		49.573	51.198	51.97	49.835		12:37	45.573
12/24/2006	16:00		49.532	51.167	51.958	49.802		16:37	45.556
12/24/2006	20:00		49.576	51.192	51.966	49.843		20:37	45.571
12/25/2006	0:00		49.624	51.227	51.976	49.886		0:37	45.595
12/25/2006	4:00		49.59	51.202	51.976	49.851		4:37	45.588
12/25/2006	8:00		49.596	51.205	51.978	49.857		8:37	45.58
12/25/2006	12:00		49.597	51.198	51.98	49.851		12:37	45.573
12/25/2006	16:00		49.559	51.182	51.972	49.824		16:37	45.566
12/25/2006	20:00		49.582	51.198	51.974	49.853		20:37	45.573
12/26/2006	0:00		49.59	51.202	51.978	49.857		0:37	45.58
12/26/2006	4:00		49.588	51.19	51.98	49.849		4:37	45.566
12/26/2006	8:00		49.594	51.2	51.987	49.863		8:37	45.578
12/26/2006	12:00		49.607	51.202	51.993	49.869		12:37	45.561
12/26/2006	16:00		49.563	51.175	51.98	49.828		16:37	45.585

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
12/26/2006	20:00		49.567	51.173	51.98	49.841		20:37	45.575
12/27/2006	0:00		49.571	51.171	51.98	49.841		0:37	45.573
12/27/2006	4:00		49.548	51.157	51.974	49.824		4:37	45.552
12/27/2006	8:00		49.521	51.14	51.964	49.8		8:37	45.532
12/27/2006	12:00		49.517	51.121	51.958	49.793		12:37	45.515
12/27/2006	16:00		49.467	51.097	51.938	49.746		16:37	45.484
12/27/2006	20:00		49.514	51.121	51.94	49.806		20:37	45.486
12/28/2006	0:00		49.53	51.124	51.946	49.82		0:37	45.493
12/28/2006	4:00		49.555	51.138	51.954	49.835		4:37	45.508
12/28/2006	8:00		49.573	51.15	51.964	49.869		8:37	45.522
12/28/2006	12:00		49.634	51.186	51.984	49.912		12:37	45.573
12/28/2006	16:00		49.64	51.192	51.999	49.91		16:37	45.595
12/28/2006	20:00		49.663	51.207	52.013	49.929		20:37	45.616
12/29/2006	0:00		49.69	51.227	52.027	49.947		0:37	45.621
12/29/2006	4:00		49.691	51.229	52.035	49.941		4:37	45.655
12/29/2006	8:00		49.691	51.23	52.041	49.941		8:37	45.67
12/29/2006	12:00		49.684	51.215	52.044	49.929		12:37	45.67
12/29/2006	16:00		49.649	51.209	52.033	49.906		16:37	45.653
12/29/2006	20:00		49.642	51.2	52.029	49.904		20:37	45.66
12/30/2006	0:00		49.636	51.2	52.027	49.904		0:37	45.648
12/30/2006	4:00		49.623	51.188	52.021	49.892		4:37	45.619
12/30/2006	8:00		49.613	51.18	52.017	49.882		8:37	45.607
12/30/2006	12:00		49.605	51.169	52.013	49.882		12:37	45.59
12/30/2006	16:00		49.582	51.163	52.005	49.861		16:37	45.544
12/30/2006	20:00		49.621	51.18	52.013	49.902		20:37	45.566
12/31/2006	0:00		49.623	51.175	52.019	49.9		0:37	45.575
12/31/2006	4:00		49.604	51.173	52.017	49.888		4:37	45.566
12/31/2006	8:00		49.611	51.171	52.017	49.892		8:37	45.566
12/31/2006	12:00		49.649	51.194	52.031	49.931		12:37	45.583
12/31/2006	16:00		49.669	51.209	52.044	49.945		16:37	45.607
12/31/2006	20:00		49.709	51.23	52.058	49.976		20:37	45.638
1/1/2007	0:00		49.739	51.232	52.074	50.001		0:37	45.667
1/1/2007	4:00		49.749	51.232	52.082	50.007		4:37	45.679
1/1/2007	8:00		49.774	51.227	52.094	50.027		8:37	45.708
1/1/2007	12:00		49.787	51.232	52.105	50.037		12:37	45.737
1/1/2007	16:00		49.768	51.236	52.101	50.019		16:37	45.737
1/1/2007	20:00		49.767	51.236	52.107	50.017		20:37	45.747
1/2/2007	0:00		49.764	51.232	52.107	50.011		0:37	45.761
1/2/2007	4:00		49.753	51.232	52.105	50.009		4:37	45.747
1/2/2007	8:00		49.74	51.223	52.103	49.994		8:37	45.735
1/2/2007	12:00		49.73	51.221	52.101	49.988		12:37	45.735
1/2/2007	16:00		49.699	51.205	52.09	50.013		16:37	45.851
1/2/2007	20:00		49.72	51.196	52.086	50.097		20:37	45.884
1/3/2007	0:00		49.722	51.192	52.084	50.038		0:37	45.798
1/3/2007	4:00		49.715	51.178	52.082	50.005		4:37	45.759
1/3/2007	8:00		49.705	51.18	52.078	49.996		8:37	45.725
1/3/2007	12:00		49.694	51.159	52.076	49.976		12:37	45.699
1/3/2007	16:00		49.644	51.14	52.062	49.927		16:37	45.655
1/3/2007	20:00		49.663	51.146	52.06	49.951		20:37	45.643
1/4/2007	0:00		49.642	51.128	52.054	49.935		0:37	45.641
1/4/2007	4:00		49.636	51.126	52.046	49.929		4:37	45.616
1/4/2007	8:00		49.617	51.105	52.039	49.908		8:37	45.593
1/4/2007	12:00		49.651	51.124	52.044	49.945		12:37	45.58

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
1/4/2007	16:00		49.604	51.097	52.031	49.9		16:37	45.588
1/4/2007	20:00		49.632	51.107	52.035	49.929		20:37	45.592
1/5/2007	0:00		49.676	51.126	52.052	49.964		0:37	45.61
1/5/2007	4:00		49.659	51.119	52.052	49.949		4:37	45.607
1/5/2007	8:00		49.676	51.121	52.06	49.958		8:37	45.593
1/5/2007	12:00		49.703	51.14	52.072	49.984		12:37	45.629
1/5/2007	16:00		49.711	51.169	52.082	50.001		16:37	45.641
1/5/2007	20:00		49.791	51.204	52.113	50.07		20:37	45.694
1/6/2007	0:00		49.83	51.227	52.121	50.095		0:37	45.745
1/6/2007	4:00		49.832	51.236	52.133	50.085		4:37	45.757
1/6/2007	8:00		49.842	51.236	52.141	50.095		8:37	45.771
1/6/2007	12:00		49.834	51.225	52.145	50.078		12:37	45.759
1/6/2007	16:00		49.762	51.2	52.127	50.017		16:37	45.767
1/6/2007	20:00		49.78	51.215	52.131	50.04		20:37	45.752
1/7/2007	0:00		49.77	51.209	52.129	50.035		0:37	45.747
1/7/2007	4:00		49.764	51.21	52.129	50.033		4:37	45.752
1/7/2007	8:00		49.78	51.23	52.135	50.056		8:37	45.747
1/7/2007	12:00		49.849	51.209	52.151	50.267		12:37	46.063
1/7/2007	16:00		49.874	51.213	52.155	50.394		16:37	46.305
1/7/2007	20:00		49.927	51.213	52.164	50.484		20:37	46.484
1/8/2007	0:00		49.96	51.211	52.166	50.532		0:37	46.577
1/8/2007	4:00		49.97	51.19	52.162	50.552		4:37	46.621
1/8/2007	8:00		49.993	51.192	52.164	50.585		8:37	46.633
1/8/2007	12:00		50.06	51.211	52.176	50.552		12:37	46.44
1/8/2007	16:00		50.069	51.225	52.182	50.433		16:37	46.293
1/8/2007	20:00		50.096	51.223	52.196	50.409		20:37	46.196
1/9/2007	0:00		50.118	51.234	52.206	50.396		0:37	46.155
1/9/2007	4:00		50.122	51.246	52.219	50.382		4:37	46.129
1/9/2007	8:00		50.129	51.252	52.227	50.374		8:37	46.102
1/9/2007	12:00		50.137	51.257	52.237	50.374		12:37	46.073
1/9/2007	16:00		50.06	51.24	52.233	50.29		16:37	46.058
1/9/2007	20:00		50.026	51.238	52.229	50.259		20:37	46.017
1/10/2007	0:00		49.993	51.229	52.223	50.228		0:37	45.979
1/10/2007	4:00		49.937	51.215	52.206	50.167		4:37	45.923
1/10/2007	8:00		49.901	51.207	52.194	50.142		8:37	45.878
1/10/2007	12:00		49.867	51.178	52.182	50.115		12:37	45.837
1/10/2007	16:00		49.822	51.161	52.166	50.079		16:37	45.793
1/10/2007	20:00		49.836	51.169	52.162	50.113		20:37	45.824
1/11/2007	0:00		49.845	51.161	52.166	50.122		0:37	45.805
1/11/2007	4:00		49.817	51.146	52.16	50.095		4:37	45.757
1/11/2007	8:00		49.801	51.136	52.153	50.079		8:37	45.747
1/11/2007	12:00		49.828	51.161	52.158	50.117		12:37	45.75
1/11/2007	16:00		49.84	51.175	52.162	50.132		16:37	45.769
1/11/2007	20:00		49.947	51.231	52.194	50.234		20:37	45.805
1/12/2007	0:00		50.003	51.231	52.223	50.271		0:37	45.868
1/12/2007	4:00		50.018	51.242	52.239	50.275		4:37	45.894
1/12/2007	8:00		50.041	51.252	52.249	50.288		8:37	45.921
1/12/2007	12:00		50.051	51.257	52.257	50.288		12:37	45.948
1/12/2007	16:00		50.01	51.254	52.259	50.245		16:37	45.918
1/12/2007	20:00		50.02	51.262	52.263	50.259		20:37	45.933
1/13/2007	0:00		50.022	51.265	52.267	50.265		0:37	45.969
1/13/2007	4:00		50.003	51.262	52.269	50.245		4:37	45.957
1/13/2007	8:00		49.989	51.261	52.269	50.234		8:37	45.957

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
1/13/2007	12:00		49.995	51.261	52.272	50.238		12:37	45.955
1/13/2007	16:00		49.945	51.25	52.261	50.193		16:37	45.938
1/13/2007	20:00		49.947	51.252	52.261	50.207		20:37	45.93
1/14/2007	0:00		49.953	51.257	52.265	50.218		0:37	45.942
1/14/2007	4:00		49.943	51.254	52.267	50.214		4:37	45.921
1/14/2007	8:00		49.943	51.256	52.267	50.218		8:37	45.926
1/14/2007	12:00		49.936	51.254	52.265	50.205		12:37	45.884
1/14/2007	16:00		49.913	51.246	52.259	50.185		16:37	45.88
1/14/2007	20:00		49.926	51.252	52.263	50.207		20:37	45.899
1/15/2007	0:00		49.955	51.258	52.272	50.232		0:37	45.926
1/15/2007	4:00		49.97	51.265	52.276	50.245		4:37	45.926
1/15/2007	8:00		50.001	51.277	52.282	50.281		8:37	45.95
1/15/2007	12:00		50.045	51.287	52.292	50.322		12:37	45.979
1/15/2007	16:00		50.012	51.279	52.294	50.275		16:37	45.979
1/15/2007	20:00		50.039	51.289	52.3	50.302		20:37	46
1/16/2007	0:00		50.051	51.291	52.306	50.312		0:37	46.027
1/16/2007	4:00		50.051	51.294	52.31	50.308		4:37	46.022
1/16/2007	8:00		50.062	51.298	52.316	50.322		8:37	46.022
1/16/2007	12:00		50.074	51.304	52.32	50.331		12:37	46.049
1/16/2007	16:00		50.035	51.294	52.32	50.289		16:37	46.027
1/16/2007	20:00		50.028	51.298	52.322	50.294		20:37	46.032
1/17/2007	0:00		50.02	51.294	52.322	50.284		0:37	46.025
1/17/2007	4:00		50.01	51.294	52.32	50.275		4:37	46.003
1/17/2007	8:00		49.98	51.283	52.312	50.245		8:37	45.981
1/17/2007	12:00		49.972	51.279	52.308	50.243		12:37	45.962
1/17/2007	16:00		49.916	51.26	52.29	50.179		16:37	45.926
1/17/2007	20:00		49.905	51.258	52.28	50.187		20:37	45.919
1/18/2007	0:00		49.897	51.256	52.274	50.193		0:37	45.909
1/18/2007	4:00		49.903	51.256	52.274	50.21		4:37	45.899
1/18/2007	8:00		49.957	51.267	52.282	50.259		8:37	45.911
1/18/2007	12:00		50.003	51.281	52.3	50.306		12:37	45.942
1/18/2007	16:00		50.016	51.283	52.312	50.304		16:37	45.957
1/18/2007	20:00		50.039	51.294	52.326	50.326		20:37	45.989
1/19/2007	0:00		50.047	51.296	52.331	50.324		0:37	45.996
1/19/2007	4:00		50.049	51.302	52.329	50.324		4:37	46.013
1/19/2007	8:00		50.026	51.3	52.331	50.318		8:37	46
1/19/2007	12:00		50.035	51.3	52.335	50.306		12:37	46.008
1/19/2007	16:00		49.995	51.291	52.333	50.273		16:37	45.983
1/19/2007	20:00		49.989	51.291	52.329	50.277		20:37	45.988
1/20/2007	0:00		50.001	51.291	52.333	50.285		0:37	45.998
1/20/2007	4:00		49.98	51.285	52.329	50.269		4:37	45.974
1/20/2007	8:00		49.97	51.281	52.324	50.259		8:37	45.969
1/20/2007	12:00		49.974	51.283	52.324	50.271		12:37	45.96
1/20/2007	16:00		49.918	51.262	52.308	50.199		16:37	45.916
1/20/2007	20:00		49.888	51.254	52.296	50.181		20:37	45.873
1/21/2007	0:00		49.855	51.242	52.284	50.16		0:37	45.841
1/21/2007	4:00		49.84	51.237	52.272	50.152		4:37	45.817
1/21/2007	8:00		49.886	51.248	52.274	50.207		8:37	45.822
1/21/2007	12:00		49.947	51.262	52.288	50.265		12:37	45.863
1/21/2007	16:00		49.976	51.269	52.3	50.289		16:37	45.899
1/21/2007	20:00		50.022	51.285	52.318	50.33		20:37	45.926
1/22/2007	0:00		50.043	51.293	52.333	50.341		0:37	45.964
1/22/2007	4:00		50.055	51.298	52.341	50.343		4:37	45.981

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
1/22/2007	8:00		50.055	51.302	52.345	50.349		8:37	45.991
1/22/2007	12:00		50.06	51.306	52.345	50.34		12:37	46.003
1/22/2007	16:00		50.018	51.293	52.343	50.3		16:37	46
1/22/2007	20:00		50.028	51.3	52.347	50.308		20:37	45.877
1/23/2007	0:00		50.01	51.294	52.345	50.295		0:37	45.991
1/23/2007	4:00		49.999	51.293	52.343	50.289		4:37	45.979
1/23/2007	8:00		49.995	51.291	52.343	50.287		8:37	45.967
1/23/2007	12:00		50.02	51.3	52.343	50.314		12:37	45.979
1/23/2007	16:00		50.012	51.296	52.347	50.302		16:37	45.993
1/23/2007	20:00		50.039	51.304	52.343	50.332		20:37	45.998
1/24/2007	0:00		50.064	51.31	52.349	50.351		0:37	45.945
1/24/2007	4:00		50.062	51.31	52.353	50.341		4:37	46.017
1/24/2007	8:00		50.07	51.314	52.359	50.355		8:37	46.022
1/24/2007	12:00		50.101	51.323	52.363	50.384		12:37	46.051
1/24/2007	16:00		50.089	51.319	52.365	50.365		16:37	46.053
1/24/2007	20:00		50.095	51.323	52.369	50.375		20:37	46.058
1/25/2007	0:00		50.11	51.327	52.371	50.386		0:37	46.068
1/25/2007	4:00		50.089	51.325	52.375	50.365		4:37	46.068
1/25/2007	8:00		50.085	51.327	52.377	50.369		8:37	46.063
1/25/2007	12:00		50.101	51.329	52.379	50.377		12:37	46.073
1/25/2007	16:00		50.06	51.318	52.381	50.343		16:37	46.058
1/25/2007	20:00		50.045	51.314	52.379	50.332		20:37	46.037
1/26/2007	0:00		50.028	51.308	52.379	50.32		0:37	46.037
1/26/2007	4:00		50.005	51.3	52.377	50.299		4:37	46.017
1/26/2007	8:00		49.976	51.291	52.369	50.275		8:37	45.991
1/26/2007	12:00		49.972	51.287	52.368	50.277		12:37	45.974
1/26/2007	16:00		49.949	51.283	52.359	50.261		16:37	45.952
1/26/2007	20:00		49.991	51.294	52.363	50.31		20:37	45.945
1/27/2007	0:00		50.039	51.306	52.371	50.353		0:37	45.993
1/27/2007	4:00		50.06	51.314	52.381	50.371		4:37	46.003
1/27/2007	8:00		50.095	51.327	52.386	50.4		8:37	46.034
1/27/2007	12:00		50.127	51.333	52.39	50.42		12:37	46.034
1/27/2007	16:00		50.124	51.337	52.394	50.406		16:37	46.09
1/27/2007	20:00		50.15	51.346	52.398	50.437		20:37	46.111
1/28/2007	0:00		50.158	51.35	52.402	50.441		0:37	46.121
1/28/2007	4:00		50.143	51.346	52.406	50.416		4:37	46.111
1/28/2007	8:00		50.137	51.352	52.408	50.414		8:37	46.102
1/28/2007	12:00		50.139	51.352	52.41	50.416		12:37	46.128
1/28/2007	16:00		50.083	51.335	52.41	50.361		16:37	46.092
1/28/2007	20:00		50.053	51.325	52.408	50.336		20:37	46.063
1/29/2007	0:00		50.037	51.321	52.406	50.334		0:37	46.056
1/29/2007	4:00		50.058	51.325	52.408	50.361		4:37	46.056
1/29/2007	8:00		50.078	51.331	52.412	50.382		8:37	46.056
1/29/2007	12:00		50.104	51.341	52.416	50.408		12:37	46.078
1/29/2007	16:00		50.081	51.333	52.416	50.375		16:37	46.073
1/29/2007	20:00		50.118	51.348	52.416	50.418		20:37	46.09
1/30/2007	0:00		50.154	51.358	52.42	50.451		0:37	46.119
1/30/2007	4:00		50.187	51.368	52.424	50.48		4:37	46.136
1/30/2007	8:00		50.198	51.372	52.428	50.482		8:37	46.165
1/30/2007	12:00		50.212	51.377	52.43	50.49		12:37	46.184
1/30/2007	16:00		50.162	51.362	52.432	50.435		16:37	46.162
1/30/2007	20:00		50.143	51.362	52.434	50.423		20:37	46.165
1/31/2007	0:00		50.118	51.354	52.434	50.398		0:37	46.145

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
1/31/2007	4:00		50.083	51.343	52.432	50.367		4:37	46.085
1/31/2007	8:00		50.066	51.341	52.43	50.361		8:37	46.082
1/31/2007	12:00		50.047	51.333	52.426	50.351		12:37	46.056
1/31/2007	16:00		50.033	51.327	52.422	50.336		16:37	46.032
1/31/2007	20:00		50.047	51.329	52.424	50.365		20:37	46.041
2/1/2007	0:00		50.062	51.331	52.426	50.375		0:37	46.049
2/1/2007	4:00		50.06	51.325	52.428	50.371		4:37	46.032
2/1/2007	8:00		50.058	51.327	52.428	50.373		8:37	46.034
2/1/2007	12:00		50.07	51.329	52.432	50.384		12:37	46.044
2/1/2007	16:00		50.045	51.323	52.43	50.353		16:37	46.022
2/1/2007	20:00		50.07	51.329	52.432	50.386		20:37	46.035
2/2/2007	0:00		50.147	51.354	52.438	50.464		0:37	46.061
2/2/2007	4:00		50.177	51.362	52.44	50.484		4:37	46.119
2/2/2007	8:00		50.183	51.366	52.445	50.49		8:37	46.133
2/2/2007	12:00		50.172	51.368	52.447	50.466		12:37	46.145
2/2/2007	16:00		50.118	51.352	52.447	50.402		16:37	46.111
2/2/2007	20:00		50.108	51.35	52.449	50.4		20:37	46.102
2/3/2007	0:00		50.12	51.356	52.451	50.425		0:37	46.119
2/3/2007	4:00		50.17	51.372	52.453	50.478		4:37	46.148
2/3/2007	8:00		50.198	51.375	52.455	50.507		8:37	46.174
2/3/2007	12:00		50.231	51.385	52.459	50.56		12:37	46.206
2/3/2007	16:00		50.2	51.377	52.461	50.502		16:37	46.201
2/3/2007	20:00		50.229	51.387	52.465	50.523		20:37	46.184
2/4/2007	0:00		50.227	51.389	52.469	50.515		0:37	46.223
2/4/2007	4:00		50.225	51.391	52.473	50.513		4:37	46.215
2/4/2007	8:00		50.239	51.395	52.475	50.531		8:37	46.225
2/4/2007	12:00		50.279	51.406	52.479	50.57		12:37	46.261
2/4/2007	16:00		50.252	51.402	52.483	50.535		16:37	46.249
2/4/2007	20:00		50.241	51.404	52.483	50.537		20:37	46.242
2/5/2007	0:00		50.239	51.404	52.489	50.519		0:37	46.256
2/5/2007	4:00		50.233	51.404	52.491	50.515		4:37	46.249
2/5/2007	8:00		50.227	51.406	52.493	50.517		8:37	46.237
2/5/2007	12:00		50.231	51.406	52.493	50.521		12:37	46.22
2/5/2007	16:00		50.198	51.399	52.495	50.492		16:37	46.232
2/5/2007	20:00		50.202	51.402	52.497	50.502		20:37	46.215
2/6/2007	0:00		50.187	51.399	52.497	50.49		0:37	46.215
2/6/2007	4:00		50.158	51.387	52.497	50.455		4:37	46.179
2/6/2007	8:00		50.12	51.377	52.495	50.425		8:37	46.145
2/6/2007	12:00		50.129	51.379	52.493	50.492		12:37	46.157
2/6/2007	16:00		50.152	51.381	52.497	50.492		16:37	46.172
2/6/2007	20:00		50.208	51.399	52.504	50.55		20:37	46.194
2/7/2007	0:00		50.248	51.408	52.506	50.566		0:37	46.145
2/7/2007	4:00		50.266	51.412	52.51	50.574		4:37	46.247
2/7/2007	8:00		50.266	51.416	52.512	50.566		8:37	46.235
2/7/2007	12:00		50.285	51.42	52.518	50.578		12:37	46.256
2/7/2007	16:00		50.254	51.414	52.52	50.541		16:37	46.249
2/7/2007	20:00		50.271	51.424	52.522	50.562		20:37	46.256
2/8/2007	0:00		50.294	51.427	52.526	50.586		0:37	46.271
2/8/2007	4:00		50.289	51.429	52.53	50.58		4:37	46.276
2/8/2007	8:00		50.292	51.431	52.534	50.591		8:37	46.278
2/8/2007	12:00		50.292	51.431	52.538	50.574		12:37	46.278
2/8/2007	16:00		50.237	51.416	52.538	50.521		16:37	46.251
2/8/2007	20:00		50.244	51.422	52.54	50.539		20:37	46.247

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
2/9/2007	0:00		50.258	51.427	52.542	50.558		0:37	46.254
2/9/2007	4:00		50.271	51.433	52.544	50.574		4:37	46.259
2/9/2007	8:00		50.281	51.437	52.548	50.58		8:37	46.264
2/9/2007	12:00		50.306	51.443	52.552	50.607		12:37	46.288
2/9/2007	16:00		50.275	51.435	52.554	50.566		16:37	46.278
2/9/2007	20:00		50.296	51.443	52.554	50.589		20:37	46.29
2/10/2007	0:00		50.302	51.445	52.559	50.597		0:37	46.295
2/10/2007	4:00		50.3	51.445	52.561	50.589		4:37	46.29
2/10/2007	8:00		50.294	51.447	52.563	50.589		8:37	46.293
2/10/2007	12:00		50.304	51.449	52.567	50.625		12:37	46.305
2/10/2007	16:00		50.256	51.435	52.567	50.562		16:37	46.278
2/10/2007	20:00		50.248	51.429	52.569	50.55		20:37	46.213
2/11/2007	0:00		50.25	51.431	52.571	50.562		0:37	46.249
2/11/2007	4:00		50.246	51.427	52.571	50.554		4:37	46.244
2/11/2007	8:00		50.227	51.424	52.571	50.543		8:37	46.206
2/11/2007	12:00		50.227	51.424	52.571	50.545		12:37	46.23
2/11/2007	16:00		50.198	51.412	52.571	50.507		16:37	46.206
2/11/2007	20:00		50.2	51.416	52.569	50.527		20:37	46.203
2/12/2007	0:00		50.214	51.416	52.573	50.539		0:37	46.155
2/12/2007	4:00		50.208	51.412	52.575	50.531		4:37	46.191
2/12/2007	8:00		50.212	51.414	52.573	50.543		8:37	46.124
2/12/2007	12:00		50.223	51.414	52.577	50.566		12:37	46.186
2/12/2007	16:00		50.208	51.41	52.577	50.533		16:37	46.162
2/12/2007	20:00		50.237	50.461	52.579	50.564		20:37	46.155
2/13/2007	0:00		50.271	51.218	52.581	50.594		0:37	46.177
2/13/2007	4:00		50.292	51.119	52.585	50.613		4:37	46.196
2/13/2007	8:00		50.335	51.158	52.591	50.648		8:37	46.237
2/13/2007	12:00		50.363	51.091	52.596	50.672		12:37	46.276
2/13/2007	16:00		50.35	51.104	52.599	50.642		16:37	46.273
2/13/2007	20:00		50.377	50.997	52.603	50.671		20:37	46.312
2/14/2007	0:00		50.381	50.943	52.61	50.671		0:37	46.329
2/14/2007	4:00		50.379	50.92	52.611	50.664		4:37	46.329
2/14/2007	8:00		50.386	50.882	52.616	50.664		8:37	46.338
2/14/2007	12:00		50.383	50.898	52.62	50.666		12:37	46.353
2/14/2007	16:00		50.352	50.998	52.622	50.627		16:37	46.334
2/14/2007	20:00		50.365	50.938	52.626	50.648		20:37	46.341
2/15/2007	0:00		50.377	50.9	52.63	50.664		0:37	46.353
2/15/2007	4:00		50.365	50.915	52.634	50.652		4:37	46.326
2/15/2007	8:00		50.367	50.906	52.636	50.65		8:37	46.343
2/15/2007	12:00		50.39	50.887	52.64	50.676		12:37	46.358
2/15/2007	16:00		50.369	50.956	52.642	50.652		16:37	46.346
2/15/2007	20:00		50.361	50.933	52.646	50.648		20:37	46.326
2/16/2007	0:00		50.338	50.97	52.646	50.629		0:37	46.338
2/16/2007	4:00		50.3	51.087	52.644	50.58		4:37	46.29
2/16/2007	8:00		50.237	51.29	52.634	50.516		8:37	46.239
2/16/2007	12:00		50.198	51.5	52.626	50.486		12:37	46.186
2/16/2007	16:00		50.177	51.627	52.618	50.529		16:37	46.181
2/16/2007	20:00		50.221	51.596	52.618	50.564		20:37	46.184
2/17/2007	0:00		50.275	51.5	52.622	50.619		0:37	46.208
2/17/2007	4:00		50.325	51.342	52.63	50.668		4:37	46.251
2/17/2007	8:00		50.381	51.167	52.646	50.714		8:37	46.29
2/17/2007	12:00		50.415	51.072	52.65	50.738		12:37	46.343
2/17/2007	16:00		50.402	51.144	52.656	50.709		16:37	46.343

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
2/17/2007	20:00		50.406	51.234	52.66	50.697		20:37	46.35
2/18/2007	0:00		50.396	51.205	52.665	50.687		0:37	46.309
2/18/2007	4:00		50.388	51.227	52.666	50.674		4:37	46.341
2/18/2007	8:00		50.358	51.277	52.666	50.652		8:37	46.305
2/18/2007	12:00		50.344	51.456	52.666	50.635		12:37	46.314
2/18/2007	16:00		50.294	51.417	52.665	50.582		16:37	46.268
2/18/2007	20:00		50.273	51.319	52.66	50.568		20:37	46.239
2/19/2007	0:00		50.256	51.362	52.655	50.561		0:37	46.206
2/19/2007	4:00		50.221	51.39	52.648	50.535		4:37	46.189
2/19/2007	8:00		50.214	51.375	52.644	50.539		8:37	46.169
2/19/2007	12:00		50.239	51.425	52.644	50.57		12:37	46.184
2/19/2007	16:00		50.25	51.414	52.646	50.58		16:37	46.191
2/19/2007	20:00		50.3	51.217	52.653	50.625		20:37	46.16
2/20/2007	0:00		50.304	51.221	52.657	50.623		0:37	46.189
2/20/2007	4:00		50.315	51.196	52.661	50.633		4:37	46.179
2/20/2007	8:00		50.315	51.257	52.662	50.629		8:37	46.169
2/20/2007	12:00		50.354	51.333	52.669	50.693		12:37	46.21
2/20/2007	16:00		50.346	51.485	52.673	50.662		16:37	46.23
2/20/2007	20:00		50.358	51.3	52.675	50.666		20:37	46.244
2/21/2007	0:00		50.373	51.36	52.677	50.678		0:37	46.268
2/21/2007	4:00		50.363	51.36	52.681	50.664		4:37	46.276
2/21/2007	8:00		50.383	51.323	52.683	50.682		8:37	46.283
2/21/2007	12:00		50.396	51.446	52.687	50.693		12:37	46.305
2/21/2007	16:00		50.398	51.595	52.689	50.695		16:37	46.326
2/21/2007	20:00		50.419	51.383	52.693	50.719		20:37	46.331
2/22/2007	0:00		50.459	51.393	52.699	50.754		0:37	46.355
2/22/2007	4:00		50.461	51.4	52.703	50.754		4:37	46.36
2/22/2007	8:00		50.467	51.406	52.705	50.767		8:37	46.358
2/22/2007	12:00		50.465	51.414	52.711	50.752		12:37	46.375
2/22/2007	16:00		50.421	51.4	52.712	50.701		16:37	46.343
2/22/2007	20:00		50.406	51.399	52.714	50.682		20:37	46.319
2/23/2007	0:00		50.379	51.39	52.714	50.658		0:37	46.276
2/23/2007	4:00		50.356	51.383	52.71	50.639		4:37	46.264
2/23/2007	8:00		50.346	51.379	52.707	50.631		8:37	46.237
2/23/2007	12:00		50.331	51.379	52.707	50.623		12:37	46.227
2/23/2007	16:00		50.3	51.366	52.701	50.586		16:37	46.189
2/23/2007	20:00		50.296	51.364	52.697	50.6		20:37	46.177
2/24/2007	0:00		50.279	51.36	52.695	50.59		0:37	46.148
2/24/2007	4:00		50.25	51.35	52.687	50.545		4:37	46.116
2/24/2007	8:00		50.239	51.346	52.683	50.547		8:37	46.058
2/24/2007	12:00		50.223	51.346	52.677	50.561		12:37	46.049
2/24/2007	16:00		50.214	51.341	52.671	50.549		16:37	46.041
2/24/2007	20:00		50.271	51.35	52.667	50.607		20:37	46.08
2/25/2007	0:00		50.369	51.385	52.681	50.707		0:37	46.131
2/25/2007	4:00		50.4	51.393	52.691	50.719		4:37	46.162
2/25/2007	8:00		50.432	51.406	52.699	50.74		8:37	46.198
2/25/2007	12:00		50.446	51.416	52.712	50.756		12:37	46.23
2/25/2007	16:00		50.415	51.412	52.714	50.703		16:37	46.242
2/25/2007	20:00		50.413	51.416	52.716	50.701		20:37	46.249
2/26/2007	0:00		50.425	51.422	52.72	50.715		0:37	46.249
2/26/2007	4:00		50.406	51.42	52.722	50.691		4:37	46.227
2/26/2007	8:00		50.415	51.424	52.721	50.701		8:37	46.232
2/26/2007	12:00		50.434	51.435	52.724	50.726		12:37	46.251

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
2/26/2007	16:00		50.423	51.431	52.728	50.711		16:37	46.256
2/26/2007	20:00		50.45	51.439	52.732	50.738		20:37	46.293
2/27/2007	0:00		50.457	51.443	52.736	50.75		0:37	46.319
2/27/2007	4:00		50.455	51.447	52.738	50.744		4:37	46.324
2/27/2007	8:00		50.452	51.449	52.74	50.74		8:37	46.334
2/27/2007	12:00		50.455	51.456	52.742	50.74		12:37	46.35
2/27/2007	16:00		50.402	51.439	52.74	50.68		16:37	46.406
2/27/2007	20:00		50.39	51.433	52.74	50.676		20:37	46.353
2/28/2007	0:00		50.371	51.429	52.742	50.656		0:37	46.324
2/28/2007	4:00		50.331	51.416	52.736	50.619		4:37	46.28
2/28/2007	8:00		50.327	51.41	52.734	50.611		8:37	46.251
2/28/2007	12:00		50.335	51.42	52.732	50.633		12:37	46.251
2/28/2007	16:00		50.306	51.408	52.728	50.611		16:37	46.225
2/28/2007	20:00		50.306	51.404	52.728	50.617		20:37	46.218
3/1/2007	0:00		50.302	51.402	52.723	50.611		0:37	46.223
3/1/2007	4:00		50.31	51.406	52.723	50.623		4:37	46.22
3/1/2007	8:00		50.379	51.425	52.73	50.693		8:37	46.235
3/1/2007	12:00		50.425	51.441	52.74	50.758		12:37	46.29
3/1/2007	16:00		50.409	51.445	52.742	50.721		16:37	46.293
3/1/2007	20:00		50.427	51.447	52.748	50.734		20:37	46.314
3/2/2007	0:00		50.434	51.454	52.75	50.73		0:37	46.312
3/2/2007	4:00		50.436	51.458	52.752	50.73		4:37	46.331
3/2/2007	8:00		50.444	51.464	52.754	50.742		8:37	46.329
3/2/2007	12:00		50.459	51.468	52.758	50.787		12:37	46.375
3/2/2007	16:00		50.448	51.47	52.758	50.75		16:37	46.365
3/2/2007	20:00		50.471	51.476	52.762	50.777		20:37	46.382
3/3/2007	0:00		50.492	51.487	52.769	50.797		0:37	46.421
3/3/2007	4:00		50.509	51.491	52.773	50.808		4:37	46.423
3/3/2007	8:00		50.538	51.503	52.778	50.84		8:37	46.428
3/3/2007	12:00		50.565	51.514	52.783	50.859		12:37	46.498
3/3/2007	16:00		50.549	51.516	52.787	50.836		16:37	46.483
3/3/2007	20:00		50.563	51.522	52.791	50.844		20:37	46.512
3/4/2007	0:00		50.561	51.528	52.795	50.846		0:37	46.532
3/4/2007	4:00		50.553	51.53	52.801	50.832		4:37	46.522
3/4/2007	8:00		50.54	51.531	52.803	50.818		8:37	46.507
3/4/2007	12:00		50.54	51.535	52.805	50.814		12:37	46.515
3/4/2007	16:00		50.523	51.533	52.803	50.812		16:37	46.65
3/4/2007	20:00		50.551	51.539	52.807	50.949		20:37	46.732
3/5/2007	0:00		50.567	51.543	52.809	50.9		0:37	46.623
3/5/2007	4:00		50.555	51.541	52.811	50.861		4:37	46.582
3/5/2007	8:00		50.551	51.543	52.815	50.861		8:37	46.553
3/5/2007	12:00		50.559	51.547	52.819	50.855		12:37	46.551
3/5/2007	16:00		50.526	51.537	52.822	50.816		16:37	46.52
3/5/2007	20:00		50.528	51.543	52.822	50.82		20:37	46.503
3/6/2007	0:00		50.54	51.549	52.826	50.836		0:37	46.51
3/6/2007	4:00		50.528	51.545	52.827	50.82		4:37	46.493
3/6/2007	8:00		50.507	51.539	52.83	50.793		8:37	46.466
3/6/2007	12:00		50.494	51.535	52.83	50.81		12:37	46.464
3/6/2007	16:00		50.467	51.528	52.828	50.769		16:37	46.435
3/6/2007	20:00		50.484	51.532	52.83	50.789		20:37	46.423
3/7/2007	0:00		50.513	51.543	52.834	50.824		0:37	46.442
3/7/2007	4:00		50.521	51.547	52.836	50.83		4:37	46.445
3/7/2007	8:00		50.54	51.555	52.84	50.849		8:37	46.462

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
3/7/2007	12:00		50.572	51.562	52.848	50.877		12:37	46.491
3/7/2007	16:00		50.553	51.56	52.848	50.848		16:37	46.488
3/7/2007	20:00		50.536	51.558	52.85	50.832		20:37	46.474
3/8/2007	0:00		50.542	51.562	52.852	50.836		0:37	46.481
3/8/2007	4:00		50.517	51.557	52.854	50.814		4:37	46.459
3/8/2007	8:00		50.513	51.557	52.854	50.807		8:37	46.449
3/8/2007	12:00		50.498	51.553	52.856	50.793		12:37	46.445
3/8/2007	16:00		50.457	51.54	52.852	50.791		16:37	46.416
3/8/2007	20:00		50.452	51.535	52.848	50.764		20:37	46.389
3/9/2007	0:00		50.45	51.533	52.846	50.764		0:37	46.379
3/9/2007	4:00		50.452	51.533	52.846	50.766		4:37	46.367
3/9/2007	8:00		50.471	51.538	52.846	50.787		8:37	46.372
3/9/2007	12:00		50.513	51.553	52.854	50.836		12:37	46.481
3/9/2007	16:00		50.511	51.555	52.858	50.849		16:37	46.548
3/9/2007	20:00		50.541	51.564	52.862	50.869		20:37	46.532
3/10/2007	0:00		50.561	51.572	52.868	50.885		0:37	46.529
3/10/2007	4:00		50.553	51.574	52.87	50.865		4:37	46.517
3/10/2007	8:00		50.569	51.578	52.874	50.879		8:37	46.52
3/10/2007	12:00		50.58	51.582	52.879	50.885		12:37	46.529
3/10/2007	16:00		50.553	51.574	52.879	50.99		16:37	46.795
3/10/2007	20:00		50.592	51.58	52.883	51.142		20:37	47.017
3/11/2007	0:00		50.636	51.584	52.885	51.24		0:37	47.162
3/11/2007	4:00		50.668	51.585	52.891	51.293		4:37	47.246
3/11/2007	8:00		50.7	51.591	52.892	51.353		8:37	47.321
3/11/2007	12:00		50.751	51.597	52.899	51.392		12:37	47.213
3/11/2007	16:00		50.739	51.594	52.903	51.203		16:37	46.949
3/11/2007	20:00		50.73	51.595	52.909	51.129		20:37	46.826
3/12/2007	0:00		50.737	51.601	52.911	51.107		0:37	46.749
3/12/2007	4:00		50.709	51.597	52.911	51.049		4:37	46.693
3/12/2007	8:00		50.701	51.599	52.913	51.027		8:37	46.655
3/12/2007	12:00		50.693	51.601	52.915	51.01		12:37	46.623
3/12/2007	16:00		50.661	51.595	52.917	50.965		16:37	46.522
3/12/2007	20:00		50.655	51.595	52.919	50.961		20:37	46.57
3/13/2007	0:00		50.653	51.599	52.921	50.961		0:37	46.551
3/13/2007	4:00		50.638	51.595	52.923	50.939		4:37	46.532
3/13/2007	8:00		50.64	51.597	52.923	50.943		8:37	46.517
3/13/2007	12:00		50.628	51.595	52.925	50.926		12:37	46.5
3/13/2007	16:00		50.592	51.586	52.923	50.908		16:37	46.478
3/13/2007	20:00		50.597	51.584	52.925	50.906		20:37	46.476
3/14/2007	0:00		50.611	51.59	52.917	50.922		0:37	46.464
3/14/2007	4:00		50.592	51.588	52.921	50.897		4:37	46.447
3/14/2007	8:00		50.601	51.592	52.923	50.908		8:37	46.447
3/14/2007	12:00		50.613	51.595	52.925	50.914		12:37	46.449
3/14/2007	16:00		50.601	51.592	52.929	50.9		16:37	46.503
3/14/2007	20:00		50.63	51.601	52.931	50.933		20:37	46.522
3/15/2007	0:00		50.657	51.609	52.931	50.963		0:37	46.522
3/15/2007	4:00		50.666	51.611	52.936	50.959		4:37	46.512
3/15/2007	8:00		50.676	51.617	52.938	50.971		8:37	46.529
3/15/2007	12:00		50.71	51.624	52.94	51.006		12:37	46.536
3/15/2007	16:00		50.695	51.626	52.944	50.974		16:37	46.553
3/15/2007	20:00		50.716	51.632	52.946	51		20:37	46.573
3/16/2007	0:00		50.734	51.642	52.952	51.023		0:37	46.597
3/16/2007	4:00		50.722	51.646	52.952	51		4:37	46.587

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
3/16/2007	8:00		50.734	51.651	52.956	51.008		8:37	46.602
3/16/2007	12:00		50.728	51.655	52.958	51		12:37	46.592
3/16/2007	16:00		50.672	51.646	52.958	50.992		16:37	46.59
3/16/2007	20:00		50.655	51.638	52.958	50.957		20:37	46.57
3/17/2007	0:00		50.645	51.636	52.96	50.937		0:37	46.556
3/17/2007	4:00		50.622	51.63	52.96	50.91		4:37	46.515
3/17/2007	8:00		50.609	51.626	52.958	50.906		8:37	46.464
3/17/2007	12:00		50.622	51.63	52.96	50.928		12:37	46.616
3/17/2007	16:00		50.609	51.628	52.96	50.916		16:37	46.534
3/17/2007	20:00		50.636	51.634	52.96	50.941		20:37	46.529
3/18/2007	0:00		50.645	51.64	52.964	50.949		0:37	46.527
3/18/2007	4:00		50.639	51.642	52.966	50.937		4:37	46.51
3/18/2007	8:00		50.626	51.64	52.966	50.924		8:37	46.503
3/18/2007	12:00		50.611	51.638	52.966	50.908		12:37	46.493
3/18/2007	16:00		50.567	51.624	52.96	50.873		16:37	46.558
3/18/2007	20:00		50.557	51.619	52.958	50.867		20:37	46.481
3/19/2007	0:00		50.583	51.622	52.96	50.896		0:37	46.464
3/19/2007	4:00		50.59	51.624	52.96	50.906		4:37	46.457
3/19/2007	8:00		50.645	51.638	52.966	50.961		8:37	46.486
3/19/2007	12:00		50.684	51.655	52.97	51.006		12:37	46.527
3/19/2007	16:00		50.686	51.671	52.972	50.998		16:37	46.539
3/19/2007	20:00		50.701	51.678	52.978	51.002		20:37	46.548
3/20/2007	0:00		50.712	51.678	52.982	51.004		0:37	46.577
3/20/2007	4:00		50.683	51.663	52.984	50.973		4:37	46.556
3/20/2007	8:00		50.672	51.657	52.986	50.961		8:37	46.553
3/20/2007	12:00		50.672	51.659	52.988	50.961		12:37	46.544
3/20/2007	16:00		50.631	51.653	52.986	50.92		16:37	46.52
3/20/2007	20:00		50.617	51.651	52.986	50.914		20:37	46.5
3/21/2007	0:00		50.628	51.655	52.986	50.926		0:37	46.5
3/21/2007	4:00		50.606	51.653	52.984	50.898		4:37	46.474
3/21/2007	8:00		50.599	51.651	52.986	50.905		8:37	46.462
3/21/2007	12:00		50.605	51.655	52.986	50.914		12:37	46.556
3/21/2007	16:00		50.592	51.651	52.986	50.902		16:37	46.505
3/21/2007	20:00		50.614	51.653	52.988	50.926		20:37	46.5
3/22/2007	0:00		50.662	51.663	52.99	50.981		0:37	46.527
3/22/2007	4:00		50.678	51.669	52.995	50.99		4:37	46.541
3/22/2007	8:00		50.681	51.671	52.974	50.99		8:37	46.544
3/22/2007	12:00		50.678	51.673	52.978	50.99		12:37	46.553
3/22/2007	16:00		50.655	51.669	52.98	50.967		16:37	46.541
3/22/2007	20:00		50.651	51.671	52.984	50.957		20:37	46.522
3/23/2007	0:00		50.653	51.673	52.984	50.961		0:37	46.529
3/23/2007	4:00		50.661	51.673	52.988	50.967		4:37	46.529
3/23/2007	8:00		50.674	51.676	52.993	50.977		8:37	46.536
3/23/2007	12:00		50.68	51.676	52.995	51.021		12:37	46.551
3/23/2007	16:00		50.661	51.676	52.997	50.971		16:37	46.841
3/23/2007	20:00		50.672	51.676	52.999	50.992		20:37	46.71
3/24/2007	0:00		50.705	51.682	53.001	51.012		0:37	46.58
3/24/2007	4:00		50.682	51.682	53.003	50.977		4:37	46.52
3/24/2007	8:00		50.701	51.684	53.005	50.996		8:37	46.561
3/24/2007	12:00		50.681	51.688	53.007	50.985		12:37	46.556
3/24/2007	16:00		50.674	51.688	53.009	50.977		16:37	46.548
3/24/2007	20:00		50.685	51.69	53.011	50.983		20:37	46.546
3/25/2007	0:00		50.693	51.692	53.011	50.99		0:37	46.536

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
3/25/2007	4:00		50.687	51.692	53.013	50.974		4:37	46.536
3/25/2007	8:00		50.691	51.694	53.015	50.982		8:37	46.536
3/25/2007	12:00		50.687	51.694	53.019	50.985		12:37	46.52
3/25/2007	16:00		50.664	51.692	53.019	50.957		16:37	46.534
3/25/2007	20:00		50.67	51.694	53.019	50.973		20:37	46.58
3/26/2007	0:00		50.683	51.696	53.019	50.982		0:37	46.633
3/26/2007	4:00		50.683	51.698	53.023	50.982		4:37	46.655
3/26/2007	8:00		50.693	51.698	53.025	50.992		8:37	46.705
3/26/2007	12:00		50.7	51.7	53.027	51.002		12:37	46.722
3/26/2007	16:00		50.697	51.701	53.027	50.994		16:37	46.742
3/26/2007	20:00		50.7	51.701	53.029	50.998		20:37	46.689
3/27/2007	0:00		50.71	51.705	53.031	51.006		0:37	46.664
3/27/2007	4:00		50.679	51.703	53.031	50.973		4:37	46.597
3/27/2007	8:00		50.677	51.703	53.031	50.977		8:37	46.604
3/27/2007	12:00		50.677	51.705	53.033	50.975		12:37	46.582
3/27/2007	16:00		50.651	51.701	53.033	50.946		16:37	46.536
3/27/2007	20:00		50.66	51.701	53.033	50.969		20:37	46.551
3/28/2007	0:00		50.668	51.703	53.035	50.975		0:37	46.541
3/28/2007	4:00		50.66	51.703	53.035	50.967		4:37	46.52
3/28/2007	8:00		50.68	51.705	53.037	50.986		8:37	46.532
3/28/2007	12:00		50.685	51.709	53.039	50.99		12:37	46.529
3/28/2007	16:00		50.682	51.709	53.039	50.982		16:37	46.529
3/28/2007	20:00		50.682	51.709	53.039	50.988		20:37	46.524
3/29/2007	0:00		50.71	51.713	53.043	51.008		0:37	46.534
3/29/2007	4:00		50.706	51.713	53.045	50.998		4:37	46.529
3/29/2007	8:00		50.727	51.715	53.05	51.022		8:37	46.527
3/29/2007	12:00		50.714	51.715	53.05	51		12:37	46.515
3/29/2007	16:00		50.714	51.717	53.054	51.002		16:37	46.51
3/29/2007	20:00		50.729	51.721	53.056	51.02		20:37	46.573
3/30/2007	0:00		50.741	51.723	53.058	51.026		0:37	46.476
3/30/2007	4:00		50.737	51.725	53.06	51.022		4:37	46.565
3/30/2007	8:00		50.745	51.727	53.06	51.039		8:37	46.503
3/30/2007	12:00		50.737	51.742	53.064	51.02		12:37	46.553
3/30/2007	16:00		50.685	51.752	53.062	50.959		16:37	46.512
3/30/2007	20:00		50.66	51.759	53.06	50.932		20:37	46.377
3/31/2007	0:00		50.637	51.807	53.062	50.901		0:37	46.111
3/31/2007	4:00		50.58	51.757	53.058	50.832		4:37	46.034
3/31/2007	8:00		50.564	51.75	53.054	50.834		8:37	46.037
3/31/2007	12:00		50.599	51.752	53.05	50.887		12:37	46.08
3/31/2007	16:00		50.631	51.761	53.052	50.928		16:37	46.104
3/31/2007	20:00		50.626	51.765	53.052	50.916		20:37	46.138
4/1/2007	0:00		50.637	51.771	53.052	50.93		0:37	46.162
4/1/2007	4:00		50.651	51.775	53.056	50.942		4:37	46.181
4/1/2007	8:00		50.679	51.784	53.058	50.973		8:37	46.213
4/1/2007	12:00		50.689	51.792	53.06	50.971		12:37	46.261
4/1/2007	16:00		50.679	51.8	53.062	50.961		16:37	46.266
4/1/2007	20:00		50.685	51.807	53.064	50.957		20:37	46.278
4/2/2007	0:00		50.687	51.821	53.066	50.961		0:37	46.302
4/2/2007	4:00		50.677	51.829	53.066	50.946		4:37	46.278
4/2/2007	8:00		50.67	51.834	53.068	50.942		8:37	46.288
4/2/2007	12:00		50.645	51.838	53.068	50.912		12:37	46.293
4/2/2007	16:00		50.608	51.838	53.066	50.877		16:37	46.256
4/2/2007	20:00		50.61	51.838	53.064	50.881		20:37	46.247

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
4/3/2007	0:00		50.614	51.84	53.062	50.889		0:37	46.256
4/3/2007	4:00		50.61	51.842	53.062	50.887		4:37	46.239
4/3/2007	8:00		50.688	51.85	53.068	50.971		8:37	46.288
4/3/2007	12:00		50.756	51.867	53.072	51.045		12:37	46.346
4/3/2007	16:00		50.754	51.883	53.001	51.028		16:37	46.355
4/3/2007	20:00		50.764	51.904	53.001	51.02		20:37	46.37
4/4/2007	0:00		50.787	51.923	53.003	51.043		0:37	46.406
4/4/2007	4:00		50.785	51.94	53.001	51.033		4:37	46.401
4/4/2007	8:00		50.789	51.962	53.001	51.033		8:37	46.416
4/4/2007	12:00		50.787	51.979	53.001	51.033		12:37	46.524
4/4/2007	16:00		50.733	51.993	53.001	50.969		16:37	46.428
4/4/2007	20:00		50.71	52.002	53.001	50.949		20:37	46.406
4/5/2007	0:00		50.731	52.018	53.001	50.983		0:37	46.37
4/5/2007	4:00		50.725	52.027	53.001	50.965		4:37	46.377
4/5/2007	8:00		50.729	52.039	53.001	50.987		8:37	46.37
4/5/2007	12:00		50.718	52.05	53.001	50.963		12:37	46.358
4/5/2007	16:00		50.697	52.06	53.001	50.94		16:37	46.326
4/5/2007	20:00		50.695	52.07	53.001	50.936		20:37	46.319
4/6/2007	0:00		50.706	52.079	52.999	50.949		0:37	46.309
4/6/2007	4:00		50.688	52.089	53.001	50.928		4:37	46.295
4/6/2007	8:00		50.708	52.099	53.001	50.955		8:37	46.307
4/6/2007	12:00		50.727	52.112	53.001	50.967		12:37	46.319
4/6/2007	16:00		50.691	52.118	53.001	50.924		16:37	46.293
4/6/2007	20:00		50.681	52.126	53.001	50.912		20:37	46.276
4/7/2007	0:00		50.685	52.135	53.001	50.922		0:37	46.271
4/7/2007	4:00		50.683	52.145	53.001	50.92		4:37	46.261
4/7/2007	8:00		50.687	52.153	52.999	50.932		8:37	46.268
4/7/2007	12:00		50.674	52.159	52.999	50.908		12:37	46.254
4/7/2007	16:00		50.637	52.159	52.999	50.864		16:37	46.227
4/7/2007	20:00		50.631	52.161	52.999	50.86		20:37	46.206
4/8/2007	0:00		50.639	52.164	52.999	50.881		0:37	46.198
4/8/2007	4:00		50.635	52.172	53.001	50.877		4:37	46.194
4/8/2007	8:00		50.639	52.176	53.001	50.881		8:37	46.191
4/8/2007	12:00		50.633	52.182	53.001	50.875		12:37	46.189
4/8/2007	16:00		50.608	52.184	53.001	50.856		16:37	46.203
4/8/2007	20:00		50.597	52.186	53.001	50.846		20:37	46.196
4/9/2007	0:00		50.608	52.188	53.001	50.852		0:37	46.179
4/9/2007	4:00		50.589	52.189	52.999	50.828		4:37	46.152
4/9/2007	8:00		50.585	52.189	53.001	50.832		8:37	46.138
4/9/2007	12:00		50.58	52.193	53.001	50.828		12:37	46.126
4/9/2007	16:00		50.553	52.189	53.001	50.787		16:37	46.104
4/9/2007	20:00		50.543	52.186	53.001	50.782		20:37	46.085
4/10/2007	0:00		50.545	52.186	53.001	50.789		0:37	46.07
4/10/2007	4:00		50.524	52.182	53.001	50.754		4:37	46.046
4/10/2007	8:00		50.505	52.178	53.001	50.737		8:37	46.015
4/10/2007	12:00		50.478	52.17	53.001	50.715		12:37	45.988
4/10/2007	16:00		50.457	52.161	52.999	50.688		16:37	45.959
4/10/2007	20:00		50.468	52.155	52.999	50.707		20:37	45.935
4/11/2007	0:00		50.455	52.151	52.999	50.7		0:37	45.911
4/11/2007	4:00		50.472	52.149	53.003	50.705		4:37	45.904
4/11/2007	8:00		50.499	52.153	53.001	50.742		8:37	45.93
4/11/2007	12:00		50.524	52.161	53.001	50.772		12:37	45.959
4/11/2007	16:00		50.543	52.174	53.001	50.791		16:37	45.993

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
4/11/2007	20:00		50.572	52.189	53.001	50.819		20:37	46.025
4/12/2007	0:00		50.597	52.203	53.001	50.838		0:37	46.061
4/12/2007	4:00		50.593	52.216	53.001	50.821		4:37	46.07
4/12/2007	8:00		50.631	52.228	53.001	50.865		8:37	46.092
4/12/2007	12:00		50.622	52.242	53.001	50.848		12:37	46.121
4/12/2007	16:00		50.587	52.251	53.001	50.838		16:37	46.114
4/12/2007	20:00		50.576	52.255	53.003	50.809		20:37	46.111
4/13/2007	0:00		50.599	52.263	53.001	50.836		0:37	46.102
4/13/2007	4:00		50.593	52.27	53.001	50.813		4:37	46.114
4/13/2007	8:00		50.593	52.278	53.001	50.813		8:37	46.102
4/13/2007	12:00		50.576	52.282	53.001	50.793		12:37	46.08
4/13/2007	16:00		50.551	52.288	53.001	50.762		16:37	46.02
4/13/2007	20:00		50.545	52.29	53.001	50.752		20:37	45.964
4/14/2007	0:00		50.526	52.29	53.001	50.725		0:37	45.916
4/14/2007	4:00		50.524	52.292	53.001	50.729		4:37	45.853
4/14/2007	8:00		50.522	52.294	53.003	50.741		8:37	45.834
4/14/2007	12:00		50.518	52.295	53.001	50.727		12:37	45.773
4/14/2007	16:00		50.495	50.528	53.001	50.696		16:37	45.595
4/14/2007	20:00		50.491	51.475	53.001	50.686		20:37	45.575
4/15/2007	0:00		50.503	51.395	53.001	50.709		0:37	45.629
4/15/2007	4:00		50.499	51.382	53.001	50.707		4:37	45.665
4/15/2007	8:00		50.505	51.375	53.001	50.711		8:37	45.711
4/15/2007	12:00		50.516	51.647	52.999	50.725		12:37	45.747
4/15/2007	16:00		50.493	51.72	52.999	50.692		16:37	45.761
4/15/2007	20:00		50.472	51.607	53.001	50.666		20:37	45.752
4/16/2007	0:00		50.478	51.462	53.001	50.674		0:37	45.761
4/16/2007	4:00		50.463	51.434	53.001	50.662		4:37	45.754
4/16/2007	8:00		50.472	51.416	53.001	50.668		8:37	45.766
4/16/2007	12:00		50.466	51.608	52.999	50.659		12:37	45.773
4/16/2007	16:00		50.43	51.552	53.001	50.619		16:37	45.744
4/16/2007	20:00		50.409	51.546	52.999	50.598		20:37	45.73
4/17/2007	0:00		50.424	51.556	52.997	50.619		0:37	45.74
4/17/2007	4:00		50.405	51.556	52.993	50.598		4:37	45.723
4/17/2007	8:00		50.392	51.554	52.989	50.582		8:37	45.723
4/17/2007	12:00		50.378	51.554	52.985	50.569		12:37	45.725
4/17/2007	16:00		50.355	51.55	52.977	50.543		16:37	45.696
4/17/2007	20:00		50.369	51.554	52.979	50.565		20:37	45.694
4/18/2007	0:00		50.363	51.56	52.977	50.565		0:37	45.687
4/18/2007	4:00		50.365	51.564	52.975	50.565		4:37	45.699
4/18/2007	8:00		50.365	51.568	52.975	50.561		8:37	45.687
4/18/2007	12:00		50.355	51.572	52.972	50.557		12:37	45.715
4/18/2007	16:00		50.328	51.566	52.968	50.52		16:37	45.696
4/18/2007	20:00		50.307	51.56	52.964	50.506		20:37	45.655
4/19/2007	0:00		50.313	51.566	52.962	50.512		0:37	45.672
4/19/2007	4:00		50.313	51.57	52.96	50.508		4:37	45.67
4/19/2007	8:00		50.313	51.572	52.958	50.51		8:37	45.672
4/19/2007	12:00		50.301	51.572	52.956	50.493		12:37	45.672
4/19/2007	16:00		50.265	51.567	52.95	50.457		16:37	45.648
4/19/2007	20:00		50.273	51.572	52.95	50.475		20:37	45.665
4/20/2007	0:00		50.294	51.578	52.948	50.493		0:37	45.662
4/20/2007	4:00		50.298	51.584	52.948	50.493		4:37	45.667
4/20/2007	8:00		50.296	51.584	52.946	50.489		8:37	45.667
4/20/2007	12:00		50.284	51.59	52.946	50.495		12:37	45.679

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
4/20/2007	16:00		50.252	51.584	52.94	50.452		16:37	45.67
4/20/2007	20:00		50.236	51.58	52.936	50.434		20:37	45.651
4/21/2007	0:00		50.246	51.59	52.934	50.446		0:37	45.645
4/21/2007	4:00		50.232	51.588	52.932	50.426		4:37	45.636
4/21/2007	8:00		50.223	51.592	52.93	50.423		8:37	45.636
4/21/2007	12:00		50.223	51.595	52.928	50.43		12:37	45.684
4/21/2007	16:00		50.179	51.584	52.918	50.377		16:37	45.725
4/21/2007	20:00		50.152	51.576	52.913	50.358		20:37	45.645
4/22/2007	0:00		50.165	51.58	52.911	50.377		0:37	45.619
4/22/2007	4:00		50.142	51.582	52.905	50.34		4:37	45.583
4/22/2007	8:00		50.112	51.573	52.897	50.323		8:37	45.551
4/22/2007	12:00		50.106	51.575	52.891	50.319		12:37	45.537
4/22/2007	16:00		50.125	51.58	52.891	50.356		16:37	45.551
4/22/2007	20:00		50.161	51.594	52.891	50.385		20:37	45.585
4/23/2007	0:00		50.202	51.603	52.889	50.413		0:37	45.595
4/23/2007	4:00		50.196	51.607	52.889	50.403		4:37	45.602
4/23/2007	8:00		50.213	51.613	52.889	50.413		8:37	45.645
4/23/2007	12:00		50.198	51.615	52.887	50.395		12:37	45.643
4/23/2007	16:00		50.148	51.615	52.881	50.34		16:37	45.626
4/23/2007	20:00		50.117	51.607	52.877	50.319		20:37	45.602
4/24/2007	0:00		50.104	51.611	52.875	50.313		0:37	45.583
4/24/2007	4:00		50.073	51.603	52.869	50.276		4:37	45.554
4/24/2007	8:00		50.058	51.6	52.865	50.272		8:37	45.537
4/24/2007	12:00		50.033	51.596	52.856	50.251		12:37	45.513
4/24/2007	16:00		50.008	51.59	52.852	50.231		16:37	45.479
4/24/2007	20:00		49.989	51.582	52.846	50.219		20:37	45.467
4/25/2007	0:00		50.039	51.596	52.844	50.272		0:37	45.469
4/25/2007	4:00		50.016	51.594	52.838	50.245		4:37	45.45
4/25/2007	8:00		50.027	51.6	52.836	50.266		8:37	45.462
4/25/2007	12:00		50.031	51.605	52.834	50.259		12:37	45.472
4/25/2007	16:00		50.018	51.605	52.828	50.249		16:37	45.462
4/25/2007	20:00		50.029	51.609	52.824	50.255		20:37	45.45
4/26/2007	0:00		50.046	51.617	52.824	50.264		0:37	45.443
4/26/2007	4:00		50.027	51.621	52.82	50.245		4:37	45.443
4/26/2007	8:00		50.041	51.625	52.818	50.266		8:37	45.457
4/26/2007	12:00		50.046	51.627	52.816	50.262		12:37	45.476
4/26/2007	16:00		50.021	51.629	52.81	50.235		16:37	45.472
4/26/2007	20:00		50.004	51.625	52.808	50.225		20:37	45.476
4/27/2007	0:00		50.021	51.63	52.806	50.243		0:37	45.484
4/27/2007	4:00		50.012	51.632	52.799	50.233		4:37	45.479
4/27/2007	8:00		50.016	51.636	52.797	50.241		8:37	45.491
4/27/2007	12:00		50.021	51.638	52.793	50.243		12:37	45.566
4/27/2007	16:00		50.002	51.638	52.791	50.22		16:37	45.493
4/27/2007	20:00		50.016	51.642	52.787	50.243		20:37	45.52
4/28/2007	0:00		50.041	51.65	52.785	50.265		0:37	45.53
4/28/2007	4:00		50.039	51.663	52.783	50.259		4:37	45.53
4/28/2007	8:00		50.044	51.669	52.781	50.264		8:37	45.546
4/28/2007	12:00		50.041	51.675	52.779	50.265		12:37	45.556
4/28/2007	16:00		50.002	51.671	52.773	50.224		16:37	45.551
4/28/2007	20:00		49.975	51.667	52.769	50.2		20:37	45.588
4/29/2007	0:00		49.985	51.669	52.765	50.216		0:37	45.561
4/29/2007	4:00		49.975	51.667	52.761	50.2		4:37	45.537
4/29/2007	8:00		49.979	51.669	52.757	50.251		8:37	45.629

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
4/29/2007	12:00		50.006	51.673	52.753	50.473		12:37	45.962
4/29/2007	16:00		50.031	51.667	52.751	50.561		16:37	46.097
4/29/2007	20:00		50.067	51.665	52.749	50.446		20:37	45.853
4/30/2007	0:00		50.071	51.663	52.744	50.364		0:37	45.732
4/30/2007	4:00		50.048	51.663	52.742	50.307		4:37	45.648
4/30/2007	8:00		50.037	51.663	52.738	50.288		8:37	45.607
4/30/2007	12:00		50.023	51.665	52.736	50.263		12:37	45.619
4/30/2007	16:00		49.981	51.66	52.728	50.218		16:37	45.546
4/30/2007	20:00		49.973	51.652	52.724	50.218		20:37	45.539
5/1/2007	0:00		49.981	51.656	52.722	50.224		0:37	45.518
5/1/2007	4:00		49.981	51.658	52.72	50.212		4:37	45.646
5/1/2007	8:00		49.97	51.659	52.718	50.208		8:37	45.735
5/1/2007	12:00		49.989	51.665	52.714	50.22		12:37	45.653
5/1/2007	16:00		49.964	51.665	52.712	50.186		16:37	45.566
5/1/2007	20:00		49.96	51.663	52.71	50.186		20:37	45.527
5/2/2007	0:00		49.964	51.667	52.708	50.185		0:37	45.494
5/2/2007	4:00		49.952	51.667	52.704	50.169		4:37	45.467
5/2/2007	8:00		49.945	51.667	52.702	50.167		8:37	45.464
5/2/2007	12:00		49.943	51.673	52.698	50.171		12:37	45.47
5/2/2007	16:00		49.927	51.673	52.694	50.144		16:37	45.44
5/2/2007	20:00		49.914	51.669	52.69	50.134		20:37	45.426
5/3/2007	0:00		49.908	51.669	52.685	50.128		0:37	45.421
5/3/2007	4:00		49.889	51.665	52.681	50.106		4:37	45.395
5/3/2007	8:00		49.881	51.662	52.675	50.106		8:37	45.378
5/3/2007	12:00		49.876	51.662	52.671	50.097		12:37	45.366
5/3/2007	16:00		49.853	51.66	52.665	50.075		16:37	45.351
5/3/2007	20:00		49.843	51.652	52.661	50.069		20:37	45.264
5/4/2007	0:00		49.858	51.656	52.659	50.085		0:37	45.31
5/4/2007	4:00		49.853	51.656	52.655	50.075		4:37	45.298
5/4/2007	8:00		49.853	51.658	52.651	50.093		8:37	45.305
5/4/2007	12:00		49.858	51.662	52.647	50.081		12:37	45.315
5/4/2007	16:00		49.826	51.657	52.641	50.038		16:37	45.288
5/4/2007	20:00		49.801	51.648	52.637	50.017		20:37	45.264
5/5/2007	0:00		49.812	51.648	52.633	50.042		0:37	45.269
5/5/2007	4:00		49.791	51.646	52.622	50.005		4:37	45.247
5/5/2007	8:00		49.785	51.644	52.618	50.011		8:37	45.235
5/5/2007	12:00		49.791	51.646	52.614	50.017		12:37	45.247
5/5/2007	16:00		49.782	51.642	52.608	50.011		16:37	45.237
5/5/2007	20:00		49.785	51.644	52.604	50.005		20:37	45.237
5/6/2007	0:00		49.782	51.648	52.6	49.999		0:37	45.24
5/6/2007	4:00		49.826	51.654	52.6	50.048		4:37	45.257
5/6/2007	8:00		49.866	50.95	52.604	50.052		8:37	44.709
5/6/2007	12:00		49.849	51.327	52.602	50.024		12:37	44.709
5/6/2007	16:00		49.835	50.199	52.602	49.993		16:37	44.368
5/6/2007	20:00		49.799	49.926	52.598	49.954		20:37	44.318
5/7/2007	0:00		49.795	49.39	49.404	49.946		0:37	44.185
5/7/2007	4:00		49.776	49.705	49.17	49.915		4:37	44.031
5/7/2007	8:00		49.757	50.262	49.307	49.888		8:37	44.047
5/7/2007	12:00		49.759	50.569	49.502	49.898		12:37	44.132
5/7/2007	16:00		49.75	50.673	49.642	49.884		16:37	44.226
5/7/2007	20:00		49.722	50.621	49.695	49.855		20:37	44.296
5/8/2007	0:00		49.709	50.566	49.701	49.849		0:37	44.371
5/8/2007	4:00		49.699	50.551	49.72	49.837		4:37	44.419

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
5/8/2007	8:00		49.678	50.561	49.738	49.821		8:37	44.47
5/8/2007	12:00		49.666	50.655	49.752	49.812		12:37	44.506
5/8/2007	16:00		49.626	50.703	49.763	49.79		16:37	44.511
5/8/2007	20:00		49.586	50.612	49.777	49.735		20:37	44.506
5/9/2007	0:00		49.571	50.606	49.791	49.724		0:37	44.509
5/9/2007	4:00		49.544	50.585	49.789	49.696		4:37	44.504
5/9/2007	8:00		49.525	50.577	49.811	49.681		8:37	44.497
5/9/2007	12:00		49.502	50.734	49.824	49.661		12:37	44.504
5/9/2007	16:00		49.471	50.741	49.858	49.624		16:37	44.444
5/9/2007	20:00		49.429	50.724	49.931	49.591		20:37	44.47
5/10/2007	0:00		49.419	50.72	50.027	49.591		0:37	44.458
5/10/2007	4:00		49.394	50.699	50.102	49.566		4:37	44.439
5/10/2007	8:00		49.379	50.747	50.176	49.558		8:37	44.444
5/10/2007	12:00		49.367	50.907	50.251	49.55		12:37	44.463
5/10/2007	16:00		49.321	50.901	50.312	49.497		16:37	44.446
5/10/2007	20:00		49.289	50.76	50.373	49.497		20:37	44.431
5/11/2007	0:00		49.284	50.87	50.436	49.482		0:37	44.417
5/11/2007	4:00		49.256	50.876	50.495	49.45		4:37	44.405
5/11/2007	8:00		49.246	50.901	50.558	49.45		8:37	44.419
5/11/2007	12:00		49.225	50.901	50.619	49.435		12:37	44.415
5/11/2007	16:00		49.175	50.881	50.67	49.39		16:37	44.398
5/11/2007	20:00		49.135	50.895	50.717	49.351		20:37	44.381
5/12/2007	0:00		49.124	50.91	50.77	49.351		0:37	44.371
5/12/2007	4:00		49.047	50.91	50.817	49.322		4:37	44.359
5/12/2007	8:00		48.977	50.933	50.862	49.333		8:37	44.364
5/12/2007	12:00		48.91	50.941	50.902	49.31		12:37	44.366
5/12/2007	16:00		48.856	50.91	50.937	49.257		16:37	44.439
5/12/2007	20:00		48.818	50.914	50.971	49.218		20:37	44.383
5/13/2007	0:00		48.782	50.937	51.008	49.224		0:37	44.335
5/13/2007	4:00		48.749	50.93	51.039	49.191		4:37	44.32
5/13/2007	8:00		48.734	50.945	51.067	49.181		8:37	44.323
5/13/2007	12:00		48.707	50.947	51.096	49.154		12:37	44.282
5/13/2007	16:00		48.665	50.91	51.116	49.097		16:37	44.267
5/13/2007	20:00		48.645	50.914	51.134	49.076		20:37	44.236
5/14/2007	0:00		48.619	50.926	51.157	49.078		0:37	44.224
5/14/2007	4:00		48.583	50.908	51.173	49.033		4:37	44.185
5/14/2007	8:00		48.571	50.926	51.189	49.021		8:37	44.171
5/14/2007	12:00		48.546	50.926	51.206	49.005		12:37	44.173
5/14/2007	16:00		48.512	50.91	51.218	48.964		16:37	44.178
5/14/2007	20:00		48.502	50.905	51.228	48.939		20:37	44.12
5/15/2007	0:00		48.48	50.914	51.241	48.941		0:37	44.103
5/15/2007	4:00		48.469	50.939	51.261	48.949		4:37	44.028
5/15/2007	8:00		48.473	50.962	51.277	48.933		8:37	44.014
5/15/2007	12:00		48.467	50.976	51.299	48.96		12:37	44.04
5/15/2007	16:00		48.45	50.97	51.313	48.914		16:37	44.031
5/15/2007	20:00		48.442	50.978	51.328	48.892		20:37	44.026
5/16/2007	0:00		48.436	50.993	51.342	48.896		0:37	44.023
5/16/2007	4:00		48.415	50.984	51.354	48.867		4:37	44.031
5/16/2007	8:00		48.402	50.997	51.366	48.849		8:37	44.036
5/16/2007	12:00		48.377	51.047	51.372	48.828		12:37	44.04
5/16/2007	16:00		48.34	51.014	51.379	48.773		16:37	44.004
5/16/2007	20:00		48.327	50.96	51.381	48.777		20:37	43.973
5/17/2007	0:00		48.319	50.984	51.389	48.757		0:37	43.978

TABLE S1.2 (Cont.)

		Water level (ft below top of casing) at indicated well						SB02	
Date	Time	MW4	MW05	MW06	MW07	MW08	SB03	Time	Water Level (ft TOC)
5/17/2007	4:00		48.294	50.985	51.395	48.742		4:37	43.966
5/17/2007	8:00		48.297	51.012	51.401	48.75		8:37	43.975
5/17/2007	12:00		48.275	51.009	51.405	48.728		12:37	43.98

TABLE S1.3 Daily precipitation data for Ramona, July 2006 to May 2007.

Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)
7/20/06	0	9/13/06	0	11/7/06	0
7/21/06	0.72	9/14/06	0	11/8/06	0
7/22/06	0	9/15/06	0.02	11/9/06	0
7/23/06	0	9/16/06	0	11/10/06	0
7/24/06	0	9/17/06	0.55	11/11/06	0
7/25/06	0	9/18/06	0	11/12/06	0
7/26/06	0	9/19/06	0	11/13/06	0
7/27/06	0.05	9/20/06	0	11/14/06	0
7/28/06	0	9/21/06	0.37	11/15/06	0
7/29/06	0	9/22/06	0.03	11/16/06	0
7/30/06	0	9/23/06	0.01	11/17/06	0
7/31/06	0	9/24/06	0	11/18/06	0
8/1/06	0	9/25/06	0	11/19/06	0
8/2/06	0.67	9/26/06	0	11/20/06	0
8/3/06	0	9/27/06	0	11/21/06	0
8/4/06	0	9/28/06	0	11/22/06	0
8/5/06	0	9/29/06	0	11/23/06	0
8/6/06	0	9/30/06	0	11/24/06	0
8/7/06	0	10/1/06	0	11/25/06	0
8/8/06	0	10/2/06	0	11/26/06	0
8/9/06	0	10/3/06	0	11/27/06	0.07
8/10/06	0.49	10/4/06	0	11/28/06	0
8/11/06	0.01	10/5/06	0	11/29/06	0
8/12/06	0	10/6/06	0	11/30/06	0
8/13/06	1.11	10/7/06	0	12/1/06	0
8/14/06	1.02	10/8/06	0	12/2/06	0
8/15/06	0.01	10/9/06	0.04	12/3/06	0
8/16/06	0.01	10/10/06	0.4	12/4/06	0
8/17/06	0.6	10/11/06	0	12/5/06	0
8/18/06	3.42	10/12/06	0	12/6/06	0
8/19/06	0.2	10/13/06	0	12/7/06	0
8/20/06	0	10/14/06	0	12/8/06	0
8/21/06	0	10/15/06	0.12	12/9/06	0
8/22/06	0	10/16/06	0.06	12/10/06	0
8/23/06	0	10/17/06	0.02	12/11/06	0
8/24/06	0	10/18/06	0	12/12/06	0
8/25/06	1.43	10/19/06	0	12/13/06	0
8/26/06	1.83	10/20/06	0	12/14/06	0
8/27/06	0.3	10/21/06	0.11	12/15/06	0
8/28/06	0.04	10/22/06	0	12/16/06	0
8/29/06	0	10/23/06	0	12/17/06	0
8/30/06	0	10/24/06	0	12/18/06	0
8/31/06	0	10/25/06	1.51	12/19/06	0
9/1/06	0	10/26/06	0.13	12/19/06	0
9/2/06	0.14	10/27/06	0.12	12/20/06	0.42
9/3/06	0	10/28/06	0	12/21/06	0.01
9/4/06	0	10/29/06	0	12/22/06	0
9/5/06	0	10/30/06	0	12/23/06	0
9/6/06	0	10/31/06	0	12/24/06	0
9/7/06	0	11/1/06	0	12/25/06	0
9/8/06	0.01	11/2/06	0	12/26/06	0
9/9/06	0.82	11/3/06	0	12/27/06	0
9/10/06	0.04	11/4/06	0	12/28/06	0
9/11/06	0	11/5/06	0	12/29/06	0
9/12/06	0	11/6/06	0	12/30/06	0

TABLE S1.3 (Cont.)

Date	Precipitation (in.)	Date	Precipitation (in.)	Date	Precipitation (in.)
12/31/06	0	2/15/07	0	4/2/07	0
1/1/07	0	2/16/07	0.19	4/3/07	0.01
1/2/07	0	2/17/07	0	4/4/07	0
1/3/07	0	2/18/07	0	4/5/07	0.03
1/4/07	0	2/19/07	0	4/6/07	0
1/5/07	0.02	2/20/07	0	4/7/07	0
1/6/07	0	2/21/07	0	4/8/07	0
1/7/07	0	2/22/07	0	4/9/07	0
1/8/07	0	2/23/07	0	4/10/07	0.96
1/9/07	0	2/24/07	0.15	4/11/07	0.33
1/10/07	0	2/25/07	0	4/12/07	0.1
1/11/07	0	2/26/07	0	4/13/07	0.91
1/12/07	0	2/27/07	0	4/14/07	0.29
1/13/07	0.01	2/28/07	0	4/15/07	0
1/14/07	0.02	3/1/07	0.23	4/16/07	0
1/15/07	0	3/2/07	0.01	4/17/07	0
1/16/07	0	3/3/07	0	4/18/07	0
1/17/07	0	3/4/07	0	4/19/07	0
1/18/07	0	3/5/07	0	4/20/07	0
1/19/07	0	3/6/07	0	4/21/07	0
1/20/07	0.48	3/7/07	0	4/22/07	0
1/21/07	0.15	3/8/07	0	4/23/07	0
1/22/07	0	3/9/07	0	4/24/07	0.26
1/23/07	0	3/10/07	0	4/25/07	0.18
1/24/07	0	3/11/07	0.05	4/26/07	0
1/25/07	0	3/12/07	0	4/27/07	0.01
1/26/07	0	3/13/07	0	4/28/07	0
1/27/07	0	3/14/07	0	4/29/07	0
1/28/07	0	3/15/07	0	4/30/07	0
1/29/07	0	3/16/07	0	5/1/07	0.64
1/30/07	0	3/17/07	0	5/2/07	0.08
1/31/07	0	3/18/07	0	5/3/07	0.49
2/1/07	0.08	3/19/07	0	5/4/07	0.01
2/2/07	0	3/20/07	0.02	5/5/07	0.34
2/3/07	0	3/21/07	0	5/6/07	5.07
2/4/07	0	3/22/07	0.01	5/7/07	0.44
2/5/07	0	3/23/07	1.25	5/8/07	0
2/6/07	0	3/24/07	0.02	5/9/07	0.03
2/7/07	0	3/25/07	0	5/10/07	0
2/8/07	0	3/26/07	0.25	5/11/07	0
2/9/07	0	3/27/07	0.15	5/12/07	0
2/10/07	0	3/28/07	0	5/13/07	0
2/11/07	0.16	3/29/07	0.35	5/14/07	0
2/12/07	0.37	3/30/07	1.64	5/15/07	0.52
2/13/07	0	3/31/07	0.03	5/16/07	0
2/14/07	0	4/1/07	0		

Supplement 2:

Field Measurements for Groundwater Samples

TABLE S2.1 Field measurements made prior to vertical-profile groundwater sampling during the 2006 investigation at Ramona.

Location	Sample	Depth (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (μS/cm)	Sample Description
TI06	RATI06-no sample	42–47	–	–	–	–	Interval dry. No sample collected.
TI06	RATI06-W-21389	48–53	6/26/06	19.9	7.19	818	Southern part of former CCC/USDA property. Very silty, turbid.
TI06	RATI06-W-21398	54–59	6/26/06	20.8	7.37	683	South-central portion of CCC/USDA site.
TI06	RATI06-W-21362	64–69	6/25/06	23.5	7.00	305	Turbid, silty, brown.
TI06	RATI06-W-21346	70–75	6/23/06	20.2	NR[a]	858	South-central portion of CCC/USDA site. Very turbid, light brown, silty.
TI07	RATI07-no sample	37–42	–	–	–	–	Interval dry. No sample collected.
TI07	RATI07-W-21363	44–49	6/25/06	23.6	7.31	524	Very silty, light brown.
TI07	RATI07-W-21400	51–56	6/26/06	20.8	7.30	620	Southwest part of former CCC/USDA property. Very silty, turbid.
TI07	RATI07-W-21356	58–63	6/23/06	16.6	7.78	809	Southwest corner of former CCC/USDA property. Very turbid, silty, light brown.
TI07	RATI07-W-21344	64–69	6/23/06	16.6	7.76	761	Southwest corner of former CCC/USDA property.
TI07	RATI07-W-21357	72–77	6/24/06	15.6	7.79	823	Southwest corner of former CCC/USDA property. Very silty, thick, light brown.
TI07	RATI07-W-21306	80.5–85.5	6/21/06	19.6	7.48	1,156	Southeast corner of former CCC/USDA property. Very silty. Nitrate sample collected for KDHE.
TI08	RATI08-W-21397	41–46	6/26/06	21.6	7.88	706	Northern part of former CCC/USDA property.
TI08	RATI08-W-21391	46–51	6/26/06	21.6	7.88	700	North-central portion of former CCC/USDA property.
TI08	RATI08-W-21383	58–63	6/29/06	13.7	7.49	747	No description recorded.
TI08	RATI08-W-21359	65–70	6/25/06	16.6	7.76	824	West-central portion of former CCC/USDA property. Slightly turbid, light brown.
TI09	RATI09-no sample	40–45	–	–	–	–	Interval dry. No sample collected.
TI09	RATI09-W-21388	46–51	6/26/06	23.4	7.30	783	North-central portion of former CCC/USDA property. Clear to slightly silty.
TI09	RATI09-W-21399	51–56	6/26/06	24.7	7.19	693	Northern part of former CCC/USDA property. High sediment load, turbid.
TI09	RATI09-W-21409	58–63	6/28/06	17.0	7.72	566	Moderate water recovery.
TI09	RATI09-W-21411	65–70	6/28/06	16.1	7.73	742	No description recorded.
TI10	RATI10-no sample	40–45	–	–	–	–	Interval dry. No sample collected.
TI10	RATI10-W-21364	46–51	6/25/06	17.6	7.23	621	Southeast corner of former CCC/USDA property. Slightly turbid, light brown.

TABLE S2.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (μS/cm)	Sample Description
TI10	RATI10-W-21370	51–56	6/26/06	14.0	7.75	845	Southeast corner of former CCC/USDA property. Very silty, turbid.
TI10	RATI10-W-21387	58–63	6/26/06	14.5	7.88	808	Southeast corner of former CCC/USDA property. Very silty.
TI10	RATI10-W-21376	64.8–69.8	6/27/06	NR	NR	NR	Southeast corner of former former CCC/USDA property. Very silty.
TI10	RATI10-W-21393	73.66–76.66	6/26/06	14.4	7.78	797	Southeast corner of former CCC/USDA property.
TI11	RATI11-W-21386	40–45	6/26/06	NR	NR	NR	Insufficient water for field parameters. Two 20-mL vials collected for VOCs analyses.
TI11	RATI11-no sample	46–51	–	–	–	–	Interval dry. No sample collected.
TI11	RATI11-W-21396	51–56	6/26/06	19.2	7.25	688	Central part of former CCC/USDA property. Very silty, turbid.
TI11	RATI11-W-21361	59–64	6/25/06	23.7	7.12	322	Very silty, light brown.
TI11	RATI11-W-21358	65–70	6/24/06	17.1	7.87	759	Minimal water.
TI12	RATI12-W-21384	45–50	6/29/06	NR	NR	NR	Insufficient water for field measurements. Two 20-mL vials collected for VOCs analyses.
TI12	RATI12-W-21378	50–55	6/28/06	NR	7.14	605	No description recorded.
TI12	RATI12-W-21407	60–65	6/28/06	13.3	7.66	786	No description recorded.
TI12	RATI12-W-21406	65–70	6/27/06	17.3	7.88	789	No description recorded.
TI13	RATI13-W-21412	40–45	6/28/06	NR	NR	NR	Insufficient water for field measurements. Four 20-mL vials collected for VOCs analyses.
TI13	RATI13-W-21417	45–50	6/29/06	NR	NR	NR	Insufficient water for field measurements. Two 20-mL vials collected for VOCs analyses.
TI13	RATI13-W-21415	50–55	6/28/06	NR	NR	NR	Insufficient water for field measurements. Four 20-mL vials collected for VOCs analyses.
TI13	RATI13-W-21413	56–61	6/28/06	NR	NR	NR	Insufficient water for field measurements. Four 20-mL vials and two 40-mL vials collected for VOCs analyses.
TI13	RATI13-W-21395	63.75–68.75	6/27/06	22.3	7.12	671	Central part of former CCC/USDA property. Very silty, turbid.
TI14	RATI14-W-21414	55–60	6/28/06	29.3	7.03	777	No description recorded.
TI14	RATI14-W-21402	65–70	6/27/06	18.9	7.66	605	East edge of former CCC/USDA property. Turbid, very silty.
TI14	RATI14-W-21403	75–80	6/26/06	24.5	7.06	702	Very silty, light brown.
TI14	RATI14-W-21401	82–87	6/26/06	22.6	6.95	543	East-central part of former CCC/USDA property.
TI15	RATI15-no sample	45–50	–	–	–	–	Interval dry. No sample collected.
TI15	RATI15-W-21427	51–56	6/30/06	23.7	7.07	905	No description recorded.

TABLE S2.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (μS/cm)	Sample Description
TI15	RATI15-W-21424	56–61	6/29/06	NR	NR	NR	Insufficient water for field measurements. Four 20-mL vials and two 40-mL vials collected for VOCs analyses.
TI15	RATI15-W-21422	61–66	6/29/06	24.8	7.25	774	No description recorded.
TI15	RATI15-W-21416	66–71	6/29/06	21.5	7.28	697	No description recorded.
TI15	RATI15-W-21380	71–76	6/29/06	22.9	7.37	706	Moderate turbidity; good water recovery.
TI15	RATI15-W-21410	76.4–81.4	6/28/06	23.4	7.11	710	No description recorded.
TI16	RATI16-no sample	46–51	–	–	–	–	Interval dry. No sample collected.
TI16	RATI16-no sample	51–56	–	–	–	–	Interval dry. No sample collected.
TI16	RATI16-W-21428	58–63	6/30/06	13.8	7.29	813	No description recorded.
TI16	RATI16-W-21426	65–70	6/29/06	17.4	7.90	630	No description recorded.
TI16	RATI16-W-21425	70–75	6/29/06	16.8	7.90	817	Upgradient of TI10 location.
TI16	RATI16-W-21423	76.5–81.5	6/29/06	16.2	7.85	850	No description recorded.
TI17	RATI17-W-21456	48.8–53.8	7/6/06	15.2	7.60	847	No description recorded.
TI17	RATI17-W-21458	57–62	7/7/06	NR	NR	NR	No description recorded.

[a] Measurement not recorded.

Supplement 3:

Quality Control for Sample Collection, Handling, and Analysis

Supplement 3:

Quality Control for Sample Collection, Handling, and Analysis

Soil and groundwater samples were collected during June and July 2006 at Ramona, Kansas, as part of the scope of work defined in the site-specific *Work Plan* (Argonne 2005) for this site. The quality assurance/quality control (QA/QC) procedures for sample collection, handling, and analysis followed during the investigation are described in detail in the *Master Work Plan* (Argonne 2002) and the site-specific *Work Plan* (Argonne 2005).

The following sections discuss the quality of the analytical data generated during the Ramona investigation. Evaluation of the organic analytical data was consistent with U.S. Environmental Protection Agency guidelines (EPA 1994).

S3.1 Sampling to Monitor Sampling Collection, Handling, and Analysis Procedures

Sample collection and handling activities were monitored by the documentation of samples as they were collected and the use of chain-of-custody forms and custody seals to ensure sample integrity during the handling and shipment of samples for analysis. The QA/QC samples collected included a field blank, equipment rinsates, and trip blanks. Field replicate samples were collected, and samples were selected for duplicate analyses as a measure of analytical precision. Selected soil and groundwater samples were shipped to secondary laboratories for verification organic analysis. The QA/QC samples are listed in Table S3.1. Analytical results for carbon tetrachloride and chloroform in the QA/QC samples collected to monitor sample collection and handling activities are in Table S3.2.

S3.1.1 Field Blank

One field blank was collected, representing water used during equipment decontamination. Carbon tetrachloride was not detected in the field blank. Chloroform was detected at trace concentration (< 1.0 μg/L; Table S3.2).

S3.1.2 Equipment Rinsates

Eight equipment rinsates were collected to monitor decontamination procedures for reusable sampling equipment. Carbon tetrachloride was not detected in the rinsate samples (Table S3.2), indicating that cross-contamination of groundwater samples did not occur during sample collection. The detections of trace concentrations of chloroform (0.2–0.3 μg/L) in three rinsate samples collected from the decontaminated sampling equipment are consistent with the concentration of chloroform present in the water used for decontamination.

S3.1.3 Trip Blanks

As an indicator of cross-contamination of samples during shipment, 16 trip blanks were prepared and included in shipments of soil or water samples shipped for organic analysis. Included in this total were 10 water trip blanks and 4 soil trip blanks sent to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne National Laboratory, Argonne, Illinois; 1 water trip blank sent to Envirosystems, Inc. (ENVSY), in Columbia, Maryland; and 1 soil trip blank to sent Severn-Trent Laboratories, Inc. (STL), in Colchester, Vermont. The analytical results, shown in Table S3.2, indicate that sample-handling procedures were followed during the Ramona investigation and that cross-contamination of samples did not occur during shipment.

S3.1.4 Replicate Samples and Duplicate Analyses

As an indicator of the consistency of the sampling methodology followed and to provide a measure of analytical precision, replicate soil and groundwater samples were collected, and samples were selected by the AGEM Laboratory for duplicate organic analyses. In addition, selected soil and groundwater samples were submitted for verification organic analysis at secondary laboratories. Replicate samples, samples selected for duplicate analyses, and samples selected for verification organic analysis are listed in Table S3.1.

S3.1.5 Non-Representative Samples

Analytical results for two groundwater samples collected to guide the selection of sampling locations were excluded from the official database as non-representative of site conditions. Initial sampling of newly installed piezometers MW05 and MW06 on July 7, 2006, was conducted without purging because of low water volume in the poorly producing wells. Subsequently, all five piezometers installed during the 2006 investigation (MW04–MW08) were sampled at the conclusion of the field program on July 13, 2006, after appropriate purging of the wells; results for the July 13 samples are reported and included in the official database.

S3.2 Quality Control for Organic Analyses of Soil and Water Samples at the AGEM Laboratory

Vertical-profile subsurface soil sampling was conducted to investigate site contamination at 3 locations, from which 57 soil samples were collected. Three replicate samples were collected for QC purposes. The subsurface soils were analyzed at the AGEM Laboratory for volatile organic compounds (VOCs), including carbon tetrachloride and chloroform. Analysis was by a modification of EPA Method 8260B (a purge-and-trap method), as referenced in the EPA's SW-846 (EPA 1998), to achieve a quantitation limit of 10 μg/kg.

Soil samples were quick-frozen on dry ice as they were collected. At the AGEM Laboratory, the VOCs in each soil sample were extracted with methanol from the sample matrix. For the purge-and-trap soil analyses, an aliquot of the methanol extract was purged, and the volatile species were transferred to a sorbent tube. After purging, the sorbent tube was heated and backflushed with an inert gas to desorb the components into the gas chromatograph-mass spectrometer (GC-MS) system.

Vertical-profile groundwater sampling was conducted at 12 locations, from which 52 groundwater samples (and an additional 9 field replicate samples) were collected for organic analysis at the AGEM Laboratory. Analysis was by EPA Method 524.2 (EPA 1995) to achieve a quantitation limit of 1.0 μg/L. Groundwater samples were also collected from 5 piezometers (sand point wells) installed as part of the 2006 investigation.

Water samples shipped to the AGEM Laboratory were analyzed by the purge-and-trap method with a GC-MS system. For the purge-and-trap analyses, VOCs in each groundwater

sample were extracted (purged) from the sample matrix by bubbling an inert gas through the sample. The purged components were trapped in a sorbent tube. After the purging, the sorbent tube was heated and backflushed with an inert gas to desorb the components into the GC-MS system.

For both the soil and water analyses, the compounds eluting from the GC column were identified by retention time and by comparison with reference library spectra. The concentration of each component was calculated by comparison of the MS response for the quantitation ion to the response for internal standards, to corresponding calibration curves, or both. The internal standard recovery limits were 80–120%. Calibration checks with each sample delivery group (SDG) were required to be within ±20% of the standard.

Samples submitted to the AGEM Laboratory for organic analysis were analyzed in 16 SDGs, as shown in Table S3.3. The QA/QC procedures followed included analysis of instrument calibration check standards, analysis of laboratory blanks, monitoring of surrogate spike recovery, and duplicate laboratory analyses. Significant results include the following:

- Samples shipped to the AGEM Laboratory were received with custody seals intact and at the appropriate temperature. All samples were analyzed within required holding times.

- Carbon tetrachloride and chloroform, contaminants of concern in the investigation, were not detected in laboratory method blanks analyzed with the water samples. However, methylene chloride and chloroform were present at trace concentrations (5.9 µg/kg and 9.2 µg/kg, respectively, below the method quantitation limit of 10 µg/kg for purge-and-trap analysis of soil samples) in the methanol used for extraction of soil samples collected early in the field program at sampling locations TI06 and TI07. Detections of methylene chloride and chloroform at similar concentrations in the soil samples from those locations are not reported. The problem was identified and corrected prior to preparation and analysis of soil samples collected at sampling location TI10, later in the field program.

- For each SDG, analytical instrument calibration was monitored by the analysis of calibration check standards. Table S3.3 shows the relative percent

difference (RPD) values between the known and calculated concentrations for the standards. The RPD values for calibration check standards analyzed in all SDGs were within the acceptable range of ±20%.

- Surrogate standard determinations were performed on samples and blanks by using surrogate spike compounds fluorobenzene, bromofluorobenzene, and 1,4-dichlorobenzene-d_4. Table S3.3 shows the percent recovery of these system-monitoring compounds for each of the analyses. With two exceptions, the surrogate recoveries were within the specified range of 80–120% for all samples, either in the initial analysis of the sample or in a successful reanalysis. The exceptions are as follows:

  - Low recovery was achieved in the analysis of trip blank RAQC-W-21429. Cross-contamination of the associated samples is not indicated, and the result for the trip blank is accepted without qualification.

  - High recovery of two surrogate compounds in the analysis of equipment rinsate RAQCRINSATE-W-21454 would not inhibit detection of contaminants of concern, and the result for the rinsate is accepted without qualification.

- Dual analyses of soil and groundwater samples were conducted at the AGEM Laboratory as a measure of consistency in the sampling and analytical methodologies. The dual analyses were accomplished through (1) the analysis of replicate samples submitted to the laboratory or (2) duplicate analyses of samples selected by the laboratory. Table S3.4 summarizes the analytical results for carbon tetrachloride and chloroform in the primary samples and their associated replicate or duplicate analyses. Consistency in both the sampling and analytical methodologies is indicated.

The analytical data from the AGEM Laboratory are acceptable for quantitative determination of contaminant distribution.

S3.3 Quality Control for Verification Organic Analysis of Soil Samples by Severn-Trent Laboratories, Inc.

In accordance with the QA/QC procedures defined in the *Master Work Plan* (Argonne 2002), selected soil samples analyzed at the AGEM Laboratory for VOCs with EPA Method 8260B were subjected to verification analysis at a second laboratory with the same analytical procedure. Accordingly, 6 of the 57 vertical-profile soil samples analyzed at the AGEM Laboratory (10.5% of the soil samples) were also analyzed by STL. The results were reported in one SDG. A discussion of the quality of the STL organic analytical data follows.

The QA/QC procedures followed by STL included initial and continuing calibration of instruments, analysis of laboratory blanks, monitoring of surrogate spike recovery, and analyses of laboratory QC samples. Significant results include the following:

- Soil samples shipped to STL were received with custody seals intact and at the appropriate temperature. All samples were analyzed within required holding times.

- Carbon tetrachloride and chloroform, the primary contaminants of concern in the investigation, were not detected in the associated laboratory blank analyzed with the samples. Trace levels of chloroform and methylene chloride were present in the methanol used for extraction of soil samples collected at sampling locations TI06 and TI07.

- Surrogate standard determinations were performed on samples and blanks by using the surrogate spike compounds toluene-d_8, 1,2-dichloroethane-d_4, bromofluorobenzene, and 1,2-dichlorobenzene-d_4. Table S3.5 shows the percent recovery of the system-monitoring compounds for each of the analyses. Recoveries of surrogate compounds were within the target ranges for most analyses. The recovery of 1,2-dichlorobenzene-d_4 trended low for soil sample RATI10-S-21434 and trip blank RA-Meohblank-71106, but other surrogate compounds were recovered well in the same analyses. Qualification of the data is not warranted.

- To evaluate the matrix effect of samples on the analytical methodology, laboratory QC samples were analyzed with the SDG by using a suite of spike compounds that included carbon tetrachloride, chloroform, and methylene chloride. Table S3.6 shows the percent recovery of these compounds in the spiked analyses. The QC limits for carbon tetrachloride and chloroform were met for the analyses. Poor recovery of methylene chloride is evident in the methanol laboratory QC sample (MEOHLCS).

Analytical results for soil samples analyzed at the AGEM Laboratory with EPA Method 8260B are supported by the analytical results obtained by STL with the same analytical method. The verification organic results for contaminants of concern in the soil samples, summarized in Table S3.7, indicate the following:

- Little evidence of carbon tetrachloride contamination was detected in the analysis of soil samples at the AGEM Laboratory. This finding was supported in the verification analysis at STL. For sample RATI10-S-21462, in which carbon tetrachloride was present, estimated concentrations below the method quantitation limit were reported by each laboratory (5.6 μg/kg by the AGEM Laboratory and 6.7 μg/kg by STL, for an RPD value of 17.8 %).

- The trace levels of chloroform present in four of the six samples submitted for verification analysis (samples collected at locations TI06 and TI07) were consistent with the levels present in the methanol used for extraction of those samples. Similar concentrations were reported by each laboratory.

- Trace levels of methylene chloride, consistent with the concentration found in the methanol, were detected in analyses of the samples from TI06 and TI07 at the AGEM Laboratory. Corresponding levels of methylene chloride were not reported in analyses by STL. As noted in Table S3.6, recovery of methylene chloride in the methanol laboratory QC sample analyzed at STL (at only 12%) was very poor.

- The high levels of 2-butanone reported by STL (not shown in Table S3.7) in some samples are discounted. In reporting the results, STL noted that the

values were manually integrated and that the chromatograph signal failed the ratio test required for positive identification of the compound.

- Trace levels of fuel-related compounds toluene, ethylbenzene, and xylene reported by STL (not shown in Table S3.7) were consistent with levels noted by the AGEM Laboratory but not quantified.

S3.4 Quality Control for Verification Organic Analysis of Groundwater Samples by Envirosystems, Inc.

In accordance with the QA/QC procedures defined in the *Master Work Plan* (Argonne 2002), the analyses of water samples at the AGEM Laboratory with EPA Method 524.2 were verified by a second laboratory using EPA-defined Contract Laboratory Program (CLP) methodology. Of the 66 groundwater samples and replicates analyzed by the AGEM Laboratory, 9 samples (13.6%) were also analyzed according to CLP methodology by ENVSY. The results were reported in one SDG. The quality of the CLP organic analytical data is discussed below.

The QA/QC procedures followed in the CLP analyses included initial and continuing calibration of instruments, analysis of laboratory blanks, and monitoring of surrogate spike recovery. Significant results include the following:

- Samples shipped to the CLP laboratory were received with custody seals intact and at the appropriate temperature. All samples were analyzed within required holding times.

- Analytical instruments were properly tuned; initial and continuing calibration checks remained within the allowable ranges for all contaminants of interest.

- Carbon tetrachloride, chloroform, and methylene chloride were not detected in the laboratory method blanks.

- Surrogate standard determinations were performed on samples and blanks by using the surrogate spike compounds toluene-d_8, bromofluorobenzene, and 1,2-dichloroethane-d_4. Table S3.8 shows the percent recovery of each system-monitoring compound for each of the CLP analyses. The recoveries of the

surrogate spikes were within the acceptable ranges (identified in Table S3.8) specific to each surrogate.

Analytical results for groundwater samples analyzed by the AGEM Laboratory with EPA Method 524.2 are supported by the analytical results from ENVSY, obtained with EPA CLP methodology. The verification organic results for contaminants of concern in the groundwater samples, summarized in Table S3.9, indicate the following:

- Little evidence of carbon tetrachloride contamination was found in the analysis of groundwater samples by the AGEM Laboratory. This finding was supported in the verification analysis by ENVSY. Carbon tetrachloride was detected above the maximum contaminant level of 5 μg/L only in sample RATI10-W-21364, collected at 46–51 ft below ground level at location TI10. Concentrations of 23 μg/L and 27 μg/L were reported by the AGEM Laboratory and ENVSY, respectively, for an RPD value of 16%. Similar consistency is evident in the chloroform results for that sample, with concentrations of 2.0 μg/L and 2.4 μg/L reported by the AGEM Laboratory and ENVSY, respectively, for an RPD value of 18.2%.

- Trace detections of carbon tetrachloride and chloroform at other sampling locations were supported by verification analysis.

- The detection of methylene chloride in sample RATI09-W-21399 at a concentration of 23 μg/L in analysis by ENVSY is questionable. Although it was not detected in the associated method blank, methylene chloride is a common laboratory contaminant; its detection at such a significant concentration in the absence of carbon tetrachloride or chloroform is rejected as non-representative of site conditions.

- The ENVSY detections of acetone at concentrations below the quantitation limit in some samples (not shown in Table S3.9) are considered to be the result of laboratory contamination, even though the compound was not detected in the blank analyzed with the samples. Acetone is also a common laboratory contaminant.

S3.5 References

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TABLE S3.1 Quality control samples collected to monitor sample collection, handling, and analysis activities during the 2006 investigation at Ramona, Kansas.

Location	Sample	Depth (ft BGL)	Sample Date	Medium	Sample Description
Field blank					
QC	RAQC-W-21421	–	6/29/06	Water	Blank of water used for equipment decontamination during 2006 investigation.
Equipment rinsates					
QC	RAQCRIN-W-21345	–	6/23/06	Water	Rinsate of decontaminated sampling bailer after collection of sample RATI07-W-21344.
QC	RAQCRIN-W-21367	–	6/24/06	Water	Rinsate of decontaminated sampling bailer after collection of sample RATI11-W-21358.
QC	RAQCRIN-W-21369	–	6/25/06	Water	Rinsate of decontaminated sampling bailer after collection of sample RATI10-W-21364.
QC	RAQCRIN-W-21405	–	6/26/06	Water	Rinsate of decontaminated sampling bailer after collection of sample RATI10-W-21393.
QC	RAQC-W-21418	–	6/29/06	Water	Rinsate of cone penetrometer rods.
QC	RATI8QC-W-21419	–	6/29/06	Water	Rinsate of decontaminated sampling bailer.
QC	RAQC-W-21420	–	6/29/06	Water	Rinsate of cone penetrometer rods.
QC	RAQCRINSATE-W-21454	–	7/13/06	Water	Rinsate of decontaminated sampling bailer used during sampling of newly installed piezometers.
Trip blanks					
QC	RAQCTB-S-21326	–	6/22/06	Soil	Trip blank sent to the AGEM Laboratory with soil samples listed on COCs 4165 and 4166.
QC	RAQCTB-W-21327	–	6/22/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COC 4168.
QC	RAQCTB-S-21342	–	6/23/06	Soil	Trip blank sent to the AGEM Laboratory with soil samples listed on COCs 4170 and 4177.
QC	RAQCTB-W-21348	–	6/24/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COC 4180.
QC	RAQCTB-W-21368	–	6/25/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COCs 4196 and 4194.

TABLE S3.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Medium	Sample Description
Trip blanks (Cont.)					
QC	RAQCTB-W-21394	–	6/27/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COC 4182.
QC	RATB01-W-62706	–	6/27/06	Water	Trip blank sent to Envirosystems, Inc., for verification organic analysis with water samples listed on COC 4031.
QC	RATBQC-W-21408	–	6/28/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COC 4197.
QC	RATBQC-W-21379	–	6/28/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COCs 4198 and 4199.
QC	RAQC-W-21429	–	6/30/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COC 4200.
QC	RATI10QC-S-21445	–	7/6/06	Soil	Trip blank sent to the AGEM Laboratory with soil samples listed on COC 4171.
QC	RAQC-W-21457	–	7/6/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COC 4172.
QC	RATIQC10-S-21446	–	7/7/06	Soil	Trip blank sent to the AGEM Laboratory with soil samples listed on COCs 3748.
QC	RAQC-W-21447	–	7/7/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COC 3749.
QC	RA-Meohblank-71106	–	7/11/06	Soil	Trip blank sent to Severn-Trent Laboratories for verification organic analysis with soil samples listed on COC 4032.
QC	RAQCTB-W-21455	–	7/13/06	Water	Trip blank sent to the AGEM Laboratory with water samples listed on COC 3751.
Replicate soil and groundwater samples					
TI06	RATI06-S-21294	30.5	6/21/06	Soil	Replicate of sample RATI06-S-21293.
TI06	RATI06-W-21347	70–75	6/23/06	Water	Replicate of sample RATI06-W-21346.
TI07	RATI07-S-21315	25	6/22/06	Soil	Replicate of sample RATI07-S-21314.
TI07	RATI07-W-21307	80.5–85.5	6/21/06	Water	Replicate of sample RATI07-W-21306.
TI08	RATI08-W-21382	58–63	6/29/06	Water	Replicate of sample RATI08-W-21383.
TI08	RATI08-W-21360	65–70	6/25/06	Water	Replicate of sample RATI08-W-21359.
TI10	RATI10-S-21439	17	7/6/06	Soil	Replicate of sample RATI10-S-21438.
TI10	RATI10-W-21390	58–63	6/26/06	Water	Replicate of sample RATI10-W-21387.

TABLE S3.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Medium	Sample Description
Replicate soil and groundwater samples (Cont.)					
TI11	RATI11-W-21381	40–45	6/29/06	Water	Replicate of sample RATI11-W-21386.
TI14	RATI14-W-21377	55–60	6/28/06	Water	Replicate of sample RATI14-W-21414.
TI14	RATI14-W-21404	75–80	6/26/06	Water	Replicate of sample RATI14-W-21403.
TI15	RATI15-W-21385	66–71	6/29/06	Water	Replicate of sample RATI15-W-21416.
Soil and groundwater samples selected by the AGEM Laboratory for duplicate organic analyses					
TI06	RATI06-S-21287	7	6/21/06	Soil	South-central portion of former CCC/USDA property.
TI06	RATI06-S-21295	33	6/22/06	Soil	South-central portion of former CCC/USDA property.
TI06	RATI06-S-21297	42	6/22/06	Soil	South-central portion of former CCC/USDA property.
TI06	RATI06-S-21298	45.5	6/22/06	Soil	South-central portion of former CCC/USDA property.
TI06	RATI06-W-21398	54–59	6/26/06	Water	South-central portion of former CCC/USDA property.
TI06	RATI06-W-21346	70–75	6/23/06	Water	South-central portion of former CCC/USDA property. Very turbid, light brown, silty.
TI07	RATI07-S-21334	52.75	6/22/06	Soil	Southwest part of former CCC/USDA property. Silty clay.
TI07	RATI07-W-21306	80.5–85.5	6/21/06	Water	Southeast corner of former CCC/USDA property. Very silty. Nitrate sample collected for KDHE.
TI09	RATI09-W-21409	58–63	6/28/06	Water	Moderate water recovery.
TI10	RATI10-S-21437	15	7/6/06	Soil	Southeast corner of former CCC/USDA property. Clay.
TI10	RATI10-S-21464	50.5	7/7/06	Soil	Southeast corner of former CCC/USDA property.
TI13	RATI13-W-21395	63.75–68.75	6/27/06	Water	Central part of former CCC/USDA property. Very silty, turbid.
TI15	RATI15-W-21416	66–71	6/29/06	Water	Southern portion of former CCC/USDA property.
TI16	RATI16-W-21428	58–63	6/30/06	Water	East of former CCC/USDA property.
Groundwater samples selected for verification organic analysis by Envirosystems, Inc.					
TI06	RATI06-W-21398	54–59	6/26/06	Water	South-central portion of former CCC/USDA property.
TI07	RATI07-W-21363	44–49	6/25/06	Water	Very silty, light brown.
TI07	RATI07-W-21400	51–56	6/26/06	Water	Southwest part of former CCC/USDA property. Very silty, turbid.
TI09	RATI09-W-21399	51–56	6/26/06	Water	Northern part of former CCC/USDA property. High sediment load, turbid.
TI10	RATI10-W-21364	46–51	6/25/06	Water	Southeast corner of former CCC/USDA property. Slightly turbid, light brown.
TI10	RATI10-W-21387	58–63	6/26/06	Water	Southeast corner of former CCC/USDA property. Very silty.
TI10	RATI10-W-21390	58–63	6/26/06	Water	Replicate of sample RATI10-W-21387.

TABLE S3.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Medium	Sample Description
Groundwater samples selected for verification organic analysis by Envirosystems, Inc. (Cont.)					
TI11	RATI11-W-21396	51–56	6/26/06	Water	Central part of former CCC/USDA property. Very silty, turbid.
TI11	RATI11-W-21361	59–64	6/25/06	Water	Very silty, light brown.
Soil samples selected for verification organic analysis by Severn-Trent Laboratories					
TI06	RATI06-S-21289	13.5	6/21/06	Soil	South-central portion of former CCC/USDA property.
TI07	RATI07-S-21312	16.75	6/22/06	Soil	Southwest part of former CCC/USDA property. Clayey silt.
TI07	RATI07-S-21332	45	6/22/06	Soil	Southwest part of former CCC/USDA property. Silty clay.
TI07	RATI07-S-21337	64.5	6/23/06	Soil	Southwest part of former CCC/USDA property. Silty, clayey sand.
TI10	RATI10-S-21434	6.4	7/6/06	Soil	Southeast corner of former CCC/USDA property. Silty clay.
TI10	RATI10-S-21462	46.5	7/7/06	Soil	Southeast corner of former CCC/USDA property. Clayey silt, moist.

TABLE S3.2 Results of organic analyses on quality control samples collected to monitor sample collection and handling activities during the 2006 investigation at Ramona, Kansas.

Sample	Sample Date	Medium	Analysis Date	Method	Laboratory	Concentration (μg/L in water; μg/kg in soil)				
						Carbon Tetrachloride	Chloroform	Methylene Chloride	Detection Limit	Quantitation Limit
Field blank										
RAQC-W-21421	6/29/06	Water	6/29/06	E524.2	AGEM	ND[a]	0.1 J[b]	ND	0.1	1.0
Equipment rinsates										
RAQCRIN-W-21345	6/23/06	Water	6/26/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RAQCRIN-W-21367	6/24/06	Water	6/27/06	E524.2	AGEM	ND	0.3 J	ND	0.1	1.0
RAQCRIN-W-21369	6/25/06	Water	6/27/06	E524.2	AGEM	ND	0.2 J	ND	0.1	1.0
RAQCRIN-W-21405	6/26/06	Water	6/28/06	E524.2	AGEM	ND	0.2 J	ND	0.1	1.0
RAQC-W-21418	6/29/06	Water	6/29/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RAQC-W-21420	6/29/06	Water	6/29/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RATI8QC-W-21419	6/29/06	Water	6/29/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RAQCRINSATE-W-21454	7/13/06	Water	7/14/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
Trip blanks										
RAQCTB-S-21326	6/22/06	Soil	6/26/06	SW8260B	AGEM	ND	ND	ND	1.0	10.0
RAQCTB-W-21327	6/22/06	Water	6/23/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RAQCTB-S-21342	6/23/06	Soil	6/28/06	SW8260B	AGEM	ND	ND	ND	1.0	10.0
RAQCTB-W-21348	6/24/06	Water	6/26/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RAQCTB-W-21368	6/25/06	Water	6/27/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RAQCTB-W-21394	6/27/06	Water	6/28/06	E524.2	AGEM	ND	0.1 J	ND	0.1	1.0
RATB01-W-62706	6/27/06	Water	7/5/06	OLM04.3	ENVSY[c]	ND	ND	ND	1.0	5.0
RATBQC-W-21379	6/28/06	Water	6/29/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RATBQC-W-21408	6/28/06	Water	6/29/06	E524.2	AGEM	ND	0.1 J	ND	0.1	1.0
RAQC-W-21429	6/30/06	Water	7/3/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RAQC-W-21457	7/6/06	Water	7/7/06	E524.2	AGEM	ND	ND	ND	0.1	1.0
RATI10QC-S-21445	7/6/06	Soil	7/11/06	SW8260B	AGEM	ND	ND	ND	1.0	10.0
RATIQC10-S-21446	7/7/06	Soil	7/11/06	SW8260B	AGEM	ND	ND	ND	1.0	10.0

TABLE S3.2 (Cont.)

Sample	Sample Date	Medium	Analysis Date	Method	Laboratory	Concentration (μg/L in water; μg/kg in soil) Carbon Tetrachloride	Chloroform	Methylene Chloride	Detection Limit	Quantitation Limit
Trip blanks (cont.)										
RAQC-W-21447	7/7/06	Water	7/10/06	E524.2	AGEM	ND	0.4 J	ND	0.1	1.0
RA-Meohblank-71106	7/11/06	Soil	7/24/06	SW8260B	STL[d]	ND	ND	ND	1.0	10.0
RAQCTB-W-21455	7/13/06	Water	7/14/06	E524.2	AGEM	ND	ND	ND	0.1	1.0

[a] ND, contaminant not detected at the indicated instrument detection limit.

[b] Qualifier J indicates an estimated concentration below the indicated method quantitation limit.

[c] ENVSY, Envirosystems, Inc.

[d] STL, Severn-Trent Laboratories.

TABLE S3.3 Calibration and surrogate recovery data for organic analyses of soil and water samples at the AGEM Laboratory.

				Measured Concentration and RPD Value for Calibration Check Standard					
	Recovery of Surrogate Compounds[a] (%)			Carbon Tetrachloride		Chloroform		Methylene Chloride	
Sample	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
SDG 06-6-23, analysis date June 23, 2006									
20-ppb standard	92	103	96	21.14	1.4	18.6	1.8	20.53	0.7
Laboratory blank	100	100	100						
RATI07-W-21306	97	104	96						
RATI07-W-21306DUP	95	100	100						
RATI07-W-21307	98	112	105						
RAQCTB-W-21327	93	97	98						
SDG 06-6-24, analysis date June 24, 2006									
20-ppb standard	100	100	100	21.56	1.9	19.03	1.2	20.61	0.8
Methanol blank	96	92	95						
RATI06-S-21293	106	103	108						
RATI06-S-21288	110	115	111						
RATI06-S-21292	108	106	113						
RATI06-S-21290	109	106	112						
RATI07-S-21311	105	103	106						
RATI07-S-21313	104	98	106						
RATI06-S-21291	104	102	109						
Methanol blank 2	104	108	105						
RATI06-S-21286	102	105	101						
RATI06-S-21287	105	98	105						
RATI06-S-21287DUP	92	95	94						
RATI07-S-21312	62[d]	60[d]	69[d]	Reanalyzed in SDG 06-6-26.					
RATI07-S-21308	103	109	110						
RATI07-S-21314	104	109	107						
RATI06-S-21294	105	111	111						

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
SDG 06-6-26, analysis date June 26, 2006									
20-ppb standard	114	110	107	23.28	3.8	20.95	1.2	23.57	4.1
Laboratory blank	100	100	100						
RATI06-W-21347	97	95	91						
RATI07-W-21357	110	115	115						
RATI07-W-21344	105	102	109						
RATI07-W-21356	100	106	107						
RATI06-W-21346	106	109	114						
RATI06-W-21346DUP	100	104	104						
RAQCRIN-W-21345	97	101	100						
RAQCTB-W-21348	98	94	94						
RATI07-S-21312	105	97	89						
RAQCTB-S-21326	93	86	84						
RATI07-S-21310	101	89	88						
RATI07-S-21309	96	84	87						
RATI07-S-21315	99	85	86						
RATI07-S-21328	97	91	83						
RATI06-S-21295	102	91	83						
RATI06-S-21295DUP	102	90	82						
Methanol blank	76[d]	80	82						
RATI06-S-21289	99	88	83						
SDG 06-6-27a, analysis date June 27, 2006									
20-ppb standard	113	112	109	17.37	3.5	19.58	0.5	19.94	0.1
Laboratory blank	100	100	100						
RATI09-W-21388	95	96	93						
RATI09-W-21399	108	120	113						

SDG 06-6-27a, analysis date June 27, 2006 (Cont.)

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
RATI10-W-21370	103	110	107						
RATI10-W-21390	101	111	109						
RATI10-W-21387	102	112	108						
RATI10-W-21364	102	107	105						
RATI11-W-21358	99	109	108						
RATI06-W-21398	102	112	108						
RATI06-W-21398DUP	90	98	96						
RATI06-W-21389	99	105	104						
RATI06-W-21362	96	102	97						
RATI07-W-21400	127[d]	129[d]	124[d]	Reanalyzed in SDG 06-6-28a.					
RATI07-W-21363	119	126[d]	122[d]	Reanalyzed in SDG 06-6-28a.					
RAQCRIN-W-21367	104	114	105						
RAQCTB-W-21368	93	103	98						
RAQCRIN-W-21369	102	106	101						
Laboratory blank 2	103	100	97						
Methanol blank	114	116	114						
RATI07-S-21333	92	93	95						
RATI07-S-21340	89	92	97						
RATI07-S-21339	94	104	110						
RATI07-S-21334	90	100	103						
RATI07-S-21334DUP	85	84	88						
SDG 06-6-27b, analysis date June 27, 2006									
20-ppb standard	105	114	109	19.78	0.3	20.26	0.3	22.53	3.0
Laboratory blank	100	100	100						
RATI08-W-21397	94	82	84						

SDG 06-6-27b, analysis date June 27, 2006 (Cont.)

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
RATI08-W-21391	98	105	103						
RATI08-W-21359	102	104	104						
RATI08-W-21360	101	107	113						
RATI07-W-21401	97	112	114						
RATI11-W-21361	100	104	102						
RATI11-W-21386	96	101	99						
Laboratory blank 2	93	90	87						
RATI11-W-21396	94	95	99						
RATI06-S-21301	95	91	101						
RATI06-S-21300	77[d]	78[d]	88	Reanalyzed in SDG 06-6-28b.					
RATI07-S-21331	101	102	107						
RATI06-S-21304	103	99	107						
RATI07-S-21338	99	101	109						
Methanol blank	100	100	100						
SDG 06-6-28a, analysis date June 28, 2006									
20-ppb standard	100	100	100	16.9	4.2	19.54	0.6	19.15	1.1
Laboratory blank	100	100	100						
RATI10-W-21393	110	103	101						
RATI14-W-21402	110	118	118						
RATI14-W-21404	107	108	111						
RATI10-W-21376	103	110	109						
RATI14-W-21403	104	107	107						
RATI13-W-21395	104	108	111						
RATI13-W-21395DUP	99	99	101						
RAQCTB-W-21394	101	102	100						
SDG 06-6-28a, analysis date June 28, 2006 (Cont.)									
RAQCRIN-W-21405	100	104	102						

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
RATI07-W-21363	99	98	99						
RATI07-W-21400	101	103	103						
SDG 06-6-28b, analysis date June 28, 2006									
20-ppb standard	110	112	116	21.61	1.9	20.06	0.1	21.73	2.1
Methanol blank	100	100	100						
RATI06-S-21300	94	95	94						
RATI07-S-21337	99	100	97						
RATI07-S-21329	102	106	105						
RATI06-S-21296	95	95	95						
RATI07-S-21335	96	96	96						
RATI06-S-21298	97	95	101						
RATI06-S-21298DUP	93	95	93						
RATI07-S-21336	97	101	96						
RATI06-S-21299	92	90	92						
RATI07-S-21330	94	93	92						
Methanol blank 2	88	93	91						
RATI06-S-21303	103	94	96						
RATI06-S-21302	105	106	101						
RATI07-S-21332	111	110	103						
RAQCTB-S-21342	99	100	101						
RATI06-S-21297	106	112	108						
RATI06-S-21297DUP	109	107	104						
Methanol blank 3	104	93	97						
SDG 06-6-29a, analysis date June 29, 2006									
20-ppb standard	110	116	108	17.2	3.8	18.56	1.9	17.91	2.8
Laboratory blank	90	84	92						

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
RATI09-W-21409	119	109	111						
RATI09-W-21409DUP	93	90	93						
RATI09-W-21411	112	110	118						
RATI15-W-21410	88	94	103						
RATI12-W-21407	94	104	112						
RATI13-W-21412	100	97	105						
RATI12-W-21406	103	108	114						
RATBQC-W-21408	86	82	90						
SDG 06-6-29b, analysis date June 29, 2006									
20-ppb standard	93	92	88	18.94	1.4	18.77	1.6	20.16	0.2
Laboratory blank	100	100	100						
RATI16-W-21423	108	106	107						
RATI15-W-21416	106	111	106						
RATI15-W-21416DUP	100	96	99						
RATI14-W-21414	99	103	103						
RATI11-W-21381	96	93	100						
RATI8QC-W-21419	110	107	106						
RAQC-W-21421	103	102	101						
RAQC-W-21420	101	97	97						
RATBQC-W-21379	98	99	94						
RAQC-W-21418	89	84	87						
RAQC-W-21418DUP	96	91	93						
Laboratory blank 2	90	88	83						
SDG 06-6-30, analysis date June 30, 2006									
20-ppb standard	113	119	102	17.51	3.3	18.57	1.9	17.71	3.0
Laboratory blank	93	95	97						

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
RATI15-W-21422	93	84	81						
RATI16-W-21424	109	104	102						
RATI16-W-21425	106	113	117						
RATI16-W-21426	102	109	109						
RATI14-W-21378	100	99	105						
RATI08-W-21383	104	106	106						
RATI13-W-21413	101	102	104						
RATI15-W-21380	101	114	111						
RATI14-W-21377	105	112	106						
RATI15-W-21385	104	110	104						
RATI13-W-21415	101	102	101						
RATI13-W-21417	96	93	95						
RATI12-W-21384	106	108	110						
RATI08-W-21382	88	96	94						
Laboratory blank 2	107	105	103						
SDG 06-7-3, analysis date July 3, 2006									
20-ppb standard	107	99	98	20.73	0.9	19.57	0.5	20.24	0.3
Laboratory blank	100	100	100						
RATI16-W-21428	95	93	95						
RATI16-W-21428DUP	101	99	100						
RATI15-W-21427	93	95	97						
SDG 06-7-3, analysis date July 3, 2006 (Cont.)									
RAQC-W-21429	58[d]	57[d]	60[d]	Result for trip blank accepted. Cross-contamination during shipment not evident.					
SDG 06-7-7, analysis date July 7, 2006									

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
20-ppb standard	92	97	105	20.11	0.1	20.26	0.3	23.03	3.5
Laboratory blank	100	100	100						
RATI17-W-21456	89	97	99						
RAQC16-W-21457	96	100	103						
SDG 06-7-10a, analysis date July 10, 2006									
20-ppb standard	100	100	100	16.84	4.3	18.9	1.4	18.51	1.9
Laboratory blank	100	100	100						
RATI17-W-21458	93	99	104						
RATI17-W-21458DUP	91	94	98						
RAQC-W-21447	89	89	93						
SDG 06-7-10b, analysis date July 10, 2006									
20-ppb standard	100	100	100	18.36	2.1	17.86	2.8	19.56	0.6
Methanol blank	100	100	100						
RATI10-S-21460	91	90	100						
RATI10-S-21443	92	94	102						
RATI10-S-21444	89	98	102						
RATI10-S-21438	92	96	104						
SDG 06-7-10b, analysis date July 10, 2006 (Cont.)									
RATI10-S-21435	90	100	101						
RATI10-S-21437	91	100	104						
RATI10-S-21437DUP	89	91	97						
Methanol blank 2	86	93	97						
RATI10-S-21433	88	86	93						

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
RATI10-S-21436	89	87	93						
RATI10-S-21439	69[d]	77[d]	107	Reanalyzed in SDG 06-7-11.					
RATI10-S-21432	89	95	96						
RATI10-S-21440	93	92	100						
RATI10-S-21431	90	98	100						
SDG 06-7-11, analysis date July 11, 2006									
20-ppb standard	100	100	100	20.48	0.6	19.97	0.0	20.74	0.9
Methanol blank	100	100	100						
RATI10-S-21442	109	119	118						
RATI10-S-21465	110	108	111						
RATI10-S-21461	103	108	108						
RATI10-S-21464	104	110	113						
RATI10-S-21464DUP	102	101	105						
Methanol blank 2	106	99	103						
RATI10-S-21463	99	100	106						
RATI10-S-21441	92	94	101						
RATI10-S-21462	89	97	101						
RATI10QC-S-21445	98	94	96						
RATIQC10-S-21446	91	96	97						
RATI10-S-21439	105	108	105						
SDG 06-7-11, analysis date July 11, 2006 (Cont.)									
RATI10-S-21434	105	107	109						
Methanol blank 3	105	107	108						
SDG 06-7-14, analysis date July 14, 2006									
20-ppb standard	93	103	99	16.05	5.5	16.99	4.1	17.71	3.0

TABLE S3.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb[b]	RPD[c]	ppb[b]	RPD[c]
Laboratory blank	100	100	100						
RATI20-W-21451	100	106	102						
RAQCRINSATE-W-21454	117	131[d]	128[d]	Result for rinsate accepted. High recovery would not inhibit contaminant detection.					
RAQCTB-W-21455	102	110	106						
RATI18-W-21452	95	109	105						
RATI19-W-21453	90	100	95						
RATI19-W-21453DUP	87	92	89						
RATI16-W-21449	90	99	95						
RATI17-W-21450	87	90	88						

[a] Quality control range for recovery = 80–120%.

[b] Concentration in parts per billion (μg/L in water or μg/kg in soil).

[c] Quality control range for RPD = ±20%.

[d] Surrogate recovery outside quality control range.

TABLE S3.4 Results for secondary quality control organic analyses at the AGEM Laboratory during the 2006 investigation at Ramona, Kansas.

					Concentration (μg/L in water; μg/kg in soil)	
Location	Depth (ft BGL)	Medium	Sample	Analysis Type	Carbon Tetrachloride	Chloroform
TI06	7	Soil	RATI06-S-21287	Primary sample	ND[a]	ND
			RATI06-S-21287DUP	Duplicate analysis	ND	ND
TI06	30.5	Soil	RATI06-S-21293	Primary sample	ND	ND
			RATI06-S-21294	Replicate	ND	ND
TI06	33	Soil	RATI06-S-21295	Primary sample	ND	ND
			RATI06-S-21295DUP	Duplicate analysis	ND	ND
TI06	42	Soil	RATI06-S-21297	Primary sample	ND	ND
			RATI06-S-21297DUP	Duplicate analysis	ND	ND
TI06	45.5	Soil	RATI06-S-21298	Primary sample	ND	ND
			RATI06-S-21298DUP	Duplicate analysis	ND	ND
TI06	54–59	Water	RATI06-W-21398	Primary sample	0.3 J[b]	0.2 J
			RATI06-W-21398DUP	Duplicate analysis	0.3 J	0.3 J
TI06	70–75	Water	RATI06-W-21346	Primary sample	ND	ND
			RATI06-W-21346DUP	Duplicate analysis	ND	ND
			RATI06-W-21347	Replicate	ND	ND
TI07	25	Soil	RATI07-S-21314	Primary sample	ND	ND
			RATI07-S-21315	Replicate	ND	ND
TI07	52.75	Soil	RATI07-S-21334	Primary sample	ND	ND
			RATI07-S-21334DUP	Duplicate analysis	ND	ND
TI07	80.5–85.5	Water	RATI07-W-21306	Primary sample	ND	ND
			RATI07-W-21306DUP	Duplicate analysis	ND	ND
			RATI07-W-21307	Replicate	ND	ND
TI08	58–63	Water	RATI08-W-21383	Primary sample	ND	ND
			RATI08-W-21382	Replicate	ND	ND
TI08	65–70	Water	RATI08-W-21359	Primary sample	ND	ND
			RATI08-W-21360	Replicate	ND	ND
TI09	58–63	Water	RATI09-W-21409	Primary sample	2.4	0.4 J
			RATI09-W-21409DUP	Duplicate analysis	2.4	0.5 J
TI10	15	Soil	RATI10-S-21437	Primary sample	ND	2.9 J
			RATI10-S-21437DUP	Duplicate analysis	ND	2.9 J
TI10	17	Soil	RATI10-S-21438	Primary sample	ND	ND
			RATI10-S-21439	Replicate	ND	ND

TABLE S3.4 (Cont.)

Location	Depth (ft BGL)	Medium	Sample	Analysis Type	Concentration (μg/L in water; μg/kg in soil) Carbon Tetrachloride	Chloroform
TI10	50.5	Soil	RATI10-S-21464	Primary sample	ND	ND
			RATI10-S-21464DUP	Duplicate analysis	ND	ND
TI10	58–63	Water	RATI10-W-21387	Primary sample	0.2 J	ND
			RATI10-W-21390	Replicate	ND	ND
TI11	40–45	Water	RATI11-W-21386	Primary sample	ND	0.2 J
			RATI11-W-21381	Replicate	ND	0.2 J
TI13	63.75–68.75	Water	RATI13-W-21395	Primary sample	ND	ND
			RATI13-W-21395DUP	Duplicate analysis	ND	ND
TI14	55–60	Water	RATI14-W-21414	Primary sample	0.7 J	ND
			RATI14-W-21377	Replicate	0.8 J	0.2 J
TI14	75–80	Water	RATI14-W-21403	Primary sample	0.3 J	ND
			RATI14-W-21404	Replicate	0.5 J	ND
TI15	66–71	Water	RATI15-W-21416	Primary sample	ND	ND
			RATI15-W-21416DUP	Duplicate analysis	ND	ND
			RATI15-W-21385	Replicate	ND	ND
TI16	58–63	Water	RATI16-W-21428	Primary sample	ND	ND
			RATI16-W-21428DUP	Duplicate analysis	ND	ND
TI17	57–62	Water	RATI17-W-21458	Primary sample	0.4 J	ND
			RATI17-W-21458DUP	Duplicate analysis	0.4 J	ND
QC	–	Water	RAQC-W-21418	Primary sample	ND	ND
			RAQC-W-21418DUP	Duplicate analysis	ND	ND

[a] ND, contaminant not detected at the instrument detection limit of 0.1 μg/L for water analyses or 1.0 μg/kg for soil analyses.

[b] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 μg/L for water or 10 μg/kg for soil.

TABLE S3.5 Recovery of system monitoring compounds in verification organic analyses of soil samples at Severn-Trent Laboratories by EPA Method 8260B.

			Recovery[a] (%)			
Sample	Analysis Date	SDG	1,2-Dichloro-ethane-d_4	Toluene-d_8	Bromofluoro-benzene	1,2-Dichloro-benzene-d_4
MEOHLCS	7/24/06	115264	108	104	98	95
RA-Meohblank-71106	7/24/06	115264	59[b]	101	105	96
RATI10-S-21434	7/24/06	115264	78[b]	106	100	96
RATI10-S-21462	7/24/06	115264	81	96	105	96
RATI07-S-21312	7/24/06	115264	83	109	97	96
RATI07-S-21332	7/24/06	115264	89	97	106	98
RATI06-S-21289	7/24/06	115264	92	94	109	97
RATI07-S-21337	7/24/06	115264	89	96	107	94
MA072406LCS	7/24/06	115264	94	100	101	98
MBLK072406MA	7/24/06	115264	101	101	104	99

[a] Quality control limits for recovery:

Compound	Range (%)
1,2-Dichloroethane-d_4	80–125
Toluene-d_8	85–115
Bromofluorobenzene	85–120
1,2-Dichlorobenzene-d_4	80–125

[b] Recovery outside quality control range.

TABLE S3.6 Recovery of contaminants of concern in laboratory quality control samples during verification organic analysis of soil samples by Severn-Trent Laboratories.

			Carbon Tetrachloride			Chloroform			Methylene Chloride		
Sample	Analysis Date	SDG	Spiked Concentration (µg/L)	Detected Concentration (µg/L)	Recovery[a] (%)	Spiked Concentration (µg/L)	Detected Concentration (µg/L)	Recovery[a] (%)	Spiked Concentration (µg/L)	Detected Concentration (µg/L)	Recovery[a] (%)
MA072406LCS	7/24/06	115264	10	9.3	93	10	9.8	98	10	10	100
MEOHLCS	7/24/06	115264	250	210	84	250	230	92	250	31	12[b]

[a] Quality control ranges for recovery:

Compound	Range (%)
Carbon tetrachloride	75–120
Chloroform	80–125
Methylene chloride	75–120

[b] Recovery outside quality control range.

TABLES3.7 Comparison of organic analysis results for soil samples analyzed by both the AGEM Laboratory and Severn-Trent Laboratories.

				AGEM Laboratory Results (μg/kg)			STL Results (μg/kg)			Relative Percent Difference		
Location	Sample	Depth (ft BGL)	Sample Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	Carbon Tetrachloride	Chloroform	Methylene Chloride	Carbon Tetrachloride	Chloroform	Methylene Chloride
TI06	RATI06-S-21289	13.5	6/21/06	ND[a]	4.2 J[b] B[c]	6.8 J B	ND	3.7 JB	d	–[e]	12.6	–
TI07	RATI07-S-21312	16.75	6/22/06	ND	6.3 J B	9.5 J B	ND	4.8 JB	d	–	27	–
TI07	RATI07-S-21332	45.0	6/22/06	ND	4.7 J B	5 J B	ND	4.8 JB	d	–	2.1	–
TI07	RATI07-S-21337	64.5	6/23/06	ND	5.6 J B	8.1 J B	ND	4.1 JB	d	–	31	–
TI10	RATI10-S-21434	6.4	7/6/06	ND	ND	ND	ND	ND	ND	–	–	–
TI10	RATI10-S-21462	46.5	7/7/06	5.6 J	ND	ND	6.7 J	ND	ND	17.8	–	–

[a] ND, contaminant not detected at the instrument detection limit of 1.0 μg/kg for the purge-and-trap method.

[b] Qualifier J indicates an estimated concentration below the AGEM Laboratory quantitation limit of 10 μg/kg for analysis of soil samples by the purge-and-trap method.

[c] Qualifier B indicates that the contaminant was present at similar concentration in the blank of methanol used for extraction of the soil sample before purge-and-trap analysis.

[d] Recovery of methylene chloride in the methanol laboratory QC sample analyzed at STL at 12% was below the minimum QC limit of 75%.

[e] Relative percent difference is not calculated when the contaminant is not detected.

TABLE S3.8 Recovery of system-monitoring compounds in verification organic analyses of water samples by Envirosystems, Inc.

Sample	Analysis Date	SDG	Recovery[a] (%) Toluene-d_8	Bromofluoro-benzene	1,2-Dichloro-ethane-d_4
VBLKHM	7/5/06	0607067	94	88	106
RATI11-W-21361	7/5/06	0607067	96	88	110
RATI09-W-21399	7/5/06	0607067	96	88	110
RATI10-W-21364	7/5/06	0607067	96	88	112
RATI10-W-21390	7/5/06	0607067	96	90	112
RATI07-W-21400	7/5/06	0607067	96	88	106
RATI06-W-21398	7/5/06	0607067	96	88	108
RATI10-W-21387	7/5/06	0607067	96	88	110
RATI07-W-21363	7/5/06	0607067	96	88	112
RATI11-W-21396	7/5/06	0607067	96	88	110
RATB01-W-62706	7/5/06	0607067	96	86	112

[a] Quality control ranges for surrogate recovery:

Compound	Range (%)
Toluene-d_8	88–110
Bromofluorobenzene	86–115
1,2-Dichloroethane-d_4	76–114

TABLE S3.9 Comparison of organic analysis results for groundwater samples analyzed by both the AGEM Laboratory and Envirosystems, Inc.

				AGEM Laboratory Results (μg/L)			ENVSY Results (μg/L)			Relative Percent Difference		
Location	Sample	Depth (ft BGL)	Sample Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	Carbon Tetrachloride	Chloroform	Methylene Chloride	Carbon Tetrachloride	Chloroform	Methylene Chloride
TI06	RATI06-W-21398	54–59	6/26/06	0.3 J[a]	0.2 J	ND[b]	ND	ND	ND	–[c]	–	–
TI07	RATI07-W-21363	44–49	6/25/06	0.3 J	1.4	ND	ND	1.7 J	ND	–	19.3	–
TI07	RATI07-W-21400	51–56	6/26/06	0.3 J	1.1	ND	ND	1.3 J	ND	–	16.6	–
TI09	RATI09-W-21399	51–56	6/26/06	0.7 J	0.4 J	ND	ND	ND	23 B[d]	–	–	–
TI10	RATI10-W-21364	46–51	6/25/06	23	2.0	ND	27	2.4 J	ND	16	18.2	–
TI10	RATI10-W-21387	58–63	6/26/06	0.2 J	ND	ND	ND	ND	ND	–	–	–
TI10	RATI10-W-21390	58–63	6/26/06	ND	ND	ND	ND	ND	ND	–	–	–
TI11	RATI11-W-21396	51–56	6/26/06	0.4 J	ND	ND	1.2 J	ND	ND	100	–	–
TI11	RATI11-W-21361	59–64	6/25/06	ND	ND	ND	ND	ND	ND	–	–	–

[a] ND, contaminant not detected at instrument detection limits of 0.1 μg/L for purge-and-trap analysis at the AGEM Laboratory and 1.0 μg/L for CLP analysis by ENVSY.

[b] Qualifier J indicates an estimated concentration below the quantitation limits of 1.0 μg/L for purge-and-trap analysis at the AGEM Laboratory and 5.0 μg/L for CLP analysis by ENVSY.

[c] Relative percent difference is not calculated when the contaminant is not detected.

[d] Qualifier B indicates that the result is not represenative of site conditions, but was likely due to laboratory contamination.

Supplement 4:

Chain-of-Custody Forms and Outside Laboratory Data

Supplement 4 Contents

4165

MATRIX: Soil	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: AGEM		Shipping Info:
PROJECT/SITE: RAMONA		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: U6C	REMARKS
6.21.06	RATI-06-S-21286	1	X	3 ft
	RATI-06-S-21287			7 ft
	RATI-06-S-21288			11 ft
	RATI-06-S-21289			13.5 ft
	RATI-06-S-21290			18 ft
	RATI-06-S-21291			22.5 ft
	RATI-06-S-21292			26.5 ft
	RATI-06-S-21293			30.5 ft
	RATI-06-S-21294			30.5 ft Dup
6.22.06	RATI-07-S-21308			2 ft
	RATI-07-S-21309			6 ft
	RATI-07-S-21310			9.25 ft
	RATI-07-S-21311			14.5 ft
	RATI-07-S-21312			16.75 ft
	RATI-07-S-21313			21.25 ft

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6.22.06	1200HR					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Joyce Abrams	6/23/06	10:30	Dry Ice

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

4166

MATRIX: Soil	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: AGEM		Shipping Info:
PROJECT/SITE: Rulison		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
6.22.06	RATI-07-S-21314	1	X	25 ft
	RATQCTB-S-21326	1	1	Trip Blank
	RATI-07-S-21315	1	1	25 ft Dup
	RATI-06-S-21295	1	1	33 ft
	RATI-07-S-21328	1	1	29.5 ft

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6'2206	1200 MT					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Jorge Alvarez	6/23/06	10:30	Dry IC

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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ER-160 (4-01)

4168

MATRIX: Water	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: AGEM		Shipping Info:
PROJECT/SITE: Ravenna		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: U of C	REMARKS
6.21.06	RATI-07-W-21306	6	X	80.5-85.5 ft
	RATI-07-W-21307	6	X	80.5-85.5 ft Dup
6.22.06	RAQCTB-W-21327	2	X	Trip Blank

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6.22.06	1200 HR					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Joyce Alvarez	6/23/06	10:30	T=4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

MATRIX: Soil
RECEIVING LAB: ASEM
PROJECT/SITE: Ramona
SAMPLER(S) (Signature)

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
6.22.06	RATI-07-S-21329	1	X	33 ft
	RATI-07-S-21330			37 ft
	RATI-07-S-21331			41.25 ft
	RATI-07-S-21332			45 ft
	RATI-07-S-21333			50 ft
	RATI-07-S-21334			52.75 ft
	RATI-07-S-21335			57
	RATI-07-S-21336			61.5 ft
	RATI-07-S-21337			64.5 ft
	RATI-07-S-21338			69.5 ft
	RATI-07-S-21339			74 ft
	RATI-07-S-21340			77 ft
	RAQCTB-S-21342			Trip Blank

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6.23.06	1200 HR					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
				6/24/06	11 am	Dry Ice

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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ER-160 (4-01)

MATRIX: Soil	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: AGEM		Shipping Info:
PROJECT/SITE: Ramona		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: U	REMARKS
6.22.06	RATI-06-S-21296	1	X	37 ft
	RATI-06-S-21297	1		42 ft
	RATI-06-S-21298	1		45.5 ft
	RATI-06-S-21299	1		49 ft
	RATI-06-S-21300	1		53.5 ft
	RATI-06-S-21301	1		56.25 ft
	RATI-06-S-20302	1		61.5 ft
	RATI-06-S-20303	1		65 ft
	RATI-06-S-20304	1		68.5 ft

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6.23.06	1200 HR					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Jorge Alvarez	6/24/06	11am	Dry Ice

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: AGEM		Shipping Info:
PROJECT/SITE: Ramona		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC									REMARKS
6.23.06	RATI-06-W-21346	6	X									70-75 ft
	RATI-06-W-21347	6	X									70-75 Dup
	RAQCTB-W-21348	2	X									Trip Blank
6.23.06	RATI-07-W-21344	6	X									64-69 ft
	RATI-07-W-21356	6	X									58-63 ft
6.24.06	RATI-07-W-21357	6	X									72-77 ft
—	RA-QCRIN-W-21345	2										not in chain of custody (ADDED)

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6.24.06	1330HR					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
				6/26/06	10am	4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

4196

MATRIX: WATER
RECEIVING LAB: AGEM
PROJECT/SITE: Rifle
SAMPLER(S) (Signature)

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
6.24.06	RATI-11-W-21358	6	X	
	RAQCRIN-W-21367	2	X	
6.25.06	RATI-08-W-21359	6		
	RATI-08-W-21360	6		
	RATI-11-W-21361	6		
	RATI-07-W-21363	6		
	RATI-06-W-21362	6		
	RAQCTB-W-21368	2		
	RATI-10-W-21364	6		
	RAQCRIN-W-21369	2		
6.26.06	RATI-10-W-21370	6		
	RATI-11-W-21386	2		
	RATI-10-W-21385	6		
	RATI-11-W-21396	6		

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6.26.06	1630hr					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Joyce Abrams	6/		

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

4194

MATRIX: WATER
RECEIVING LAB: AGEM
PROJECT/SITE: Rumona
SAMPLER(S) (Signature)

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: U/C									REMARKS
6.26.06	RATI-08-W-21397	4	X									
	RATI-09-W-21388	6	X									
	RATI-06-W-21389	6	X									
	RATI-06-W-21398	6	X									
	RATI-09-W-21399	6	X									
	RATI-10-W-21390	6	X									
	RATI-08-W-21391	1	X									NOT ENOUGH WATER FOR ADDITIONAL SAMPLES
	RATI-07-W-21400	6	X									
	RATI-07-W-21401	6	X									RA-TI14-W-21401 — 8 vial labels

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6.26.06	1630HR					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Jorge Alvarado			

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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ER-160 (4-01)

4182

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: AGEM		Shipping Info:
PROJECT/SITE: Rulison		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
6.26.06	RATI-14-W-21403	6	X	
6.27.06	RATI-14-W-21402	6	X	
6.26.06	RATI-10-W-21393	6	X	
6.26.06	RATI-14-W-21404	6	X	
6.26.06	RAQCRIN-W-21405	2	X	
6.27.06	RATI10-W-21376	6	X	
6.27.06	RAQCTB-W-21394	2	X	
6.27.06	RATI-13-W-21395	6	X	

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6.27.06	1630					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
				6/28/06	11:20a	4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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2. It is in your view, after having been in your possession; or,
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ER-160 (4-01)

4197

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: ARGONNE NATIONAL LAB		Shipping Info:
PROJECT/SITE: RMA/KS		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
27 JUN 06	RATI-12-W-21406	6	6	
28 JUN 06	RATI-12-W-21407	6	6	
28 JUN 06	RATBQC-W-21408	2	2	TRIP BLANK
28 JUN 06	RATI09-W-21409	6	6	
28 JUN 06	RATI15-W-21410	6	6	
28 JUN 06	RATI08-W-21411	6	6	
28 JUN 06	RATI 13-W-21412	4	4	

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	28 JUN 06	4:45 PM.					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
				6/29/06	10am	T=4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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ER-160 (4-01)

4198

MATRIX: Water	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: Argonne National Lab		Shipping Info:
PROJECT/SITE: RAMONA, KS		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature): L.M. Thomas		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
28 JUN 06	RATI14-W-21414	4	4	
28 JUN 06	RATI13-W-21413	6	6	
28 JUN 06	RATI13-W-21415	4	4	
28 JUN 06	RATI14-W-21377	6	6	
28 JUN 06	RATI14-W-21378	4	4	Ti-12 NOT Ti 14
28 JUN 06	RATBQC-W-21379	2	2	Trip Blank
29 JUNE 06	RATI15-W-21380	6	6	
29 JUNE 06	RATI11-W-21381	2	2	
29 JUNE 06	RATI08-W-21382	6	6	Duplicate Sample
29 JUNE 06	RATI08-W-21383	6	6	
29 JUNE 06	RATI12-W-21384	2	2	
29 JUNE 06	RATI05-W-21385	6	6	~~Priority Sample~~
29 JUNE 06	RATI15-W-21416	6	6	Priority Sample
29 JUNE 06	RATI13-W-21417	2	2	
29 JUN 06	RAQC-W-21418	2	2	QC

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
L.M. Thomas	29 JUN 06	1920hr	Daryl Bin				

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Joyce Abraham	6/30/06	10a	4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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Have C
of 2 4199

MATRIX: Water	ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*	Shipping Container No.
RECEIVING LAB: Argonne National Lab		Shipping Info:
PROJECT/SITE: Ramona, KS		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC									REMARKS
29 June 06	RATI8QC-W-21419	2	2									Rinsate
29 June 06	RAQC-W-21420	2	2									Rinsate
29 June 06	RAQC-W-21421	2	2									Rinsate
29 June 06	RATI5-W-21422	6	6									Priority
29 June 06	RATI6-W-21423	6	6									Priority
29 June 06	RATI6-W-21424	6	6									Priority TI15 NOT TI16
29 June 06	RATI6-W-21425	6	6									
29 June 06	RATI6-W-21426	6	6									

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	29 June 06	1920 hr	[signature]				

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			[signature]	6/30/06	10c	4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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ER-160 (4-01)

4200

MATRIX: Water	**ARGONNE NATIONAL LABORATORY**	Shipping Container No.
RECEIVING LAB: Allcode National Lab	**CHAIN OF CUSTODY RECORD***	Shipping Info:
PROJECT/SITE: Kansas KS	ANALYSIS	ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature): L.M. LaMonaca		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	VOC	REMARKS
30 JUNE 06	RATI15-W-21427	6	6	Priority
30 JUNE 06	RATI16-W-21428	6	6	Priority
30 JUN. 06	RAQC-W-21429	2	2	TRIP BLANK

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
L.M. LaMonaca	2:00 PM	6-30-06					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Joyce Alvarado	7/3/06	9am	4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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1. It is in your possession; or,
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ER-160 (4-01)

MATRIX: Soils
RECEIVING LAB: Argonne National Lab

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:

PROJECT/SITE: RAMONA, KS
SAMPLER(S) (Signature): LM Thomas

ANL Field Contact (Name & Temporary Phone): David Surgnier 785-965-7136

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
06 July 06	RATI10-S-21431	1	1	
06 July 06	RATI10-S-21432	1	1	
06 July 06	RATI10-S-21433	1	1	
06 July 06	RATI10-S-21434	1	1	
06 July 06	RATI10-S-21435	1	1	
06 July 06	RATI10-S-21436	1	1	
06 July 06	RATI10-S-21437	1	1	
06 July 06	RATI10-S-21438	1	1	
06 July 06	RATI10-S-21439	1	1	Dupl.
06 July 06	RATI10-S-21440	1		
06 July 06	RATI10QC-S-21445	1	1	Trip

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
LM Thomas	06 July 06	14:45					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Jorge Alvarado	7/7/06	9:30a	Dry Ice

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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4. It is in a designated secure area.

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ER-160 (4-01)

MATRIX: water

RECEIVING LAB: Argonne National Lab

PROJECT/SITE: Ramona, Kansas

SAMPLER(S) (Signature) L.M. Lorenz

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.

Shipping Info:

ANL Field Contact (Name & Temporary Phone): David Surgnier 785-965-7136

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
06 July 06	RATI17-W-21456	6	6	
06 July 06	DAQC17-W-21457	2	2	Trip Blanks

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
L.M. Lorenz	7/6/06						

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Joyce Abrahamson	7/7/06	9:30a	T=4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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ER-160 (4-01)

MATRIX: Soils	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: ARGONNE NAT. LAB		Shipping Info:
PROJECT/SITE: RAMONA, KS		ANL Field Contact (Name & Temporary Phone): David Sucgnier 785-965-7136
SAMPLER(S) (Signature) Jay Thomas		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
06-July 06	RATI10-5-21441	1	1	
06-July 06	RATI10-5-21442	1	1	
06 July 06	RATI10-5-21443	1	1	
06 July 06	RATI10-5-21444	1	1	
07 July 06	RATI10-5-21460	1	1	
07 July 06	RATI10-5-21461	1	1	
07 July 06	RATI10-5-21462	1	1	
07 July 06	RATI10-5-21463	1	1	
07 July 06	RATI10-5-21464	1	1	
07 July 06	RATI10-5-21465	1	1	
07 July 06	RATI10QC-5-21446	1	1	Trip-QC

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	07July06	2:00 P.M.					
Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks	
[signature]			[signature]	7/8/06	9:30		

Y	N	FOR LAB USE ONLY
✓		Custody seal was intact when shipment received.
✓		Sample containers were intact when received.
✓		Shipment was at required temperature when received.
✓		Sample labels, Tags and COC agree.

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3. It was in your possession and you locked it up; or,
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ER-160 (4-01)

3749

MATRIX: Water	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: Argonne National Lab		Shipping Info:
PROJECT/SITE: Ramona, Kansas		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature) L.M. Lorenz		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC									REMARKS
07 July 06	RATI17-W-21458	6	6	✓								Priority
07 July 06	RATI17-W-21459	6	6	✓								Priority
07 July 06	RAQC-W-21447	2	2	✓								Trip Blanks
07 July 06	RATI12-W-21457	6	6	✓								Priority

2 coolers
2
CMK

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
L.M. Lorenz	163 dkt	07 July 06					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			CMK	7/8/06	9:30	

Y	N	FOR LAB USE ONLY
✓		Custody seal was intact when shipment received.
✓		Sample containers were intact when received.
✓		Shipment was at required temperature when received.
✓		Sample labels, Tags and COC agree.

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3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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ER-160 (4-01)

3751

MATRIX: Water	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: Argonne National Lab		Shipping Info:
PROJECT/SITE: Ramona KS.		ANL Field Contact (Name & Temporary Phone): Daryl Bierc 402-416-7255
SAMPLER(S) (Signature) Daryl Bierc		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
July 13 - 2006	RATI16-W-21449	6	✓	
July 13 - 2006	RATI17-W-21450	6	✓	
July 13 - 2006	RATI20-W-21451	6	✓	
July 13 - 2006	RATI18-W-21452	6	✓	
July 13 - 2006	RATI19-W-21453	6	✓	
July 13 - 2006	RAQCRinsate-W-21454	4	✓	Rinsate & Decon water
July 13 - 2006	RAQCTB-W-21455	4	✓	Trip Blank

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Daryl Bierc	July 13-2006	1345					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Joyce Abarca	7/14/06	10 am	T=4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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ER-160 (4-01)

MATRIX: WATER

RECEIVING LAB: Envirosystems

PROJECT/SITE: RAMONA

SAMPLER(S) (Signature) Lotreniere

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.

Shipping Info:

ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOCs	REMARKS
6/26/06	RA-TI10-W-21387	2-40mL	✓	
6/25/06	RA-TI11-W-21361		✓	
6/26/06	RA-TI09-W-21399		✓	
6/25/06	RA-TI10-W-21364		✓	
6/26/06	RA-TI06-W-21398		✓	
6/26/06	RA-TI11-W-21396		✓	
6/25/06	RA-TI07-W-21363		✓	
6/26/06	RA-TI10-W-21390		✓	
6/26/06	RA-TI07-W-21400		✓	
6/27/06	RA-TB01-W-62706		✓	

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Jaya Chavarria	6/27/06	2:40p			6/28/06	10:10 a.m.	Linda Lee

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
						Cooler 2°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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ER-160 (4-01)

00504

MATRIX: Soil in Methanol

RECEIVING LAB: STL-Burlington

PROJECT/SITE: RAMONA/ICS

SAMPLER(S) (Signature): daFreniere

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.

Shipping Info:

ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS	REMARKS
				Mass (g)
7/10/06	RA-S-21434 (10A)	1-20mL		14.597
	RA-S-21462 (10A)			10.482
	RA-S-21312 (10A)			12.210
	RA-S-21332 (20A)			9.279
	RA-S-21289 (19A)			12.172
	RA-S-21337 (10A)			10.646
	RA-MeOH Blank			—

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Roger Ahrens	7/11/06	10am					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
M R Dupin	07/11/06	9:45AM	Joan Destin	07/12/06	0930	

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
□ —	X	Shipment was at required temperature when received.
△ —	X	Sample labels, Tags and COC agree.

*A sample is under custody if:
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2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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ER-160 (4-01)

△ The Sample Container labels do not include RA-S- as found on COC.

□ Cooler received at 7.9°C

△ No dates found on Sample Container labels. Used dates from COC for login.

△ Container labels include dup1 for all samples not found on COC.

ENVIROSYSTEMS, INC.

9200 Rumsey Road • Suite B102 • Columbia, Maryland 21045-1934
Phone (410) 964-0330 • Fax (410) 740-9306
Email: info@envsystems.com • Webpage: www.envsystems.com/envsys

July 13, 2006

Jorge S. Alvarado, Ph.D
Argonne National Laboratory
Environmental Sciences Division
Applied Geoscience and Environmental
Management Section
9700 South Cass Avenue, EV-203-A137
Argonne, Illinois 60439

RE: ENVSYS Report 0607067

Dear Jorge:

Enclosed is the Analytical Data Package for the samples received on June 28th, 2006 for volatile organics analysis by US EPA CLP SOW OLM04.3

Please do not hesitate to call me if you have any questions, comments, or require additional information.

Sincerely,

Mohan Khare, Ph.D
President/CEO

MK/pl

1. Narrative

00002 PL
7/13/06

SDG NARRATIVE

LABORATORY NAME: ENVIROSYSTEMS, INC.

CLIENT: ARGONNE NATIONAL LABORATORY

DATA SAMPLES RECEIVED AT LABORATORY: JUNE 28TH , 2006

SAMPLE ANALYSES INCLUDED IN THIS REPORT:

CLIENT #	LAB ID#	ANALYSIS	MATRIX	VOA pH
RA-TI10-W-21387	0060609-01	VOA	WATER	7
RA-TI11-W-21361	0060609-02	VOA	WATER	7
RA-TI09-W-21399	0060609-03	VOA	WATER	7
RA-TI10-W-21364	0060609-04	VOA	WATER	7
RA-TI06-W-21398	0060609-05	VOA	WATER	7
RA-TI11-W-21396	0060609-06	VOA	WATER	7
RA-TI07-W-21363	0060609-07	VOA	WATER	7
RA-TI10-W-21390	0060609-08	VOA	WATER	7
RA-TI07-W-21400	0060609-09	VOA	WATER	7
RA-TB01-W-62706	0060609-10	VOA	WATER	7

Matrix spike/matrix spike duplicate analysis was not performed for this case.

Samples for this SDG are analyzed by EPA SOW OLMO4.3 for multi-media multi-concentration organics. Sample detection limits have meet client requirements.

The cooler temperature was measured to be two degrees Celsius upon receipt. One vial NA-TI30-W-20712 was received broken at the laboratory. Sufficient sample was available to perform VOC analysis.

The volatile analysis was performed on an Agilent 5975 GC/MS using a Restek RTX-624 20 meter column with an inner diameter of 0.18mm and a 1 micron film thickness. The trap used with the autosampler is a 0.3 cm OD x 28.5 cm L ENCON Ambient Packed Trap.

Three compounds did not meet the initial calibration criteria. Percent RSD for bromomethane and 2-butanone were greater than 20.5.

All other QC criteria were met for all samples included in this report.

Thomas F. Scott

Thomas F. Scott.

DATE: 7-13-06

July 13th 2006

00002

PV

7/13/06

2. SGD Cover Sheet/Traffic Reports

4031

MATRIX: WATER
RECEIVING LAB: Envirosystems
PROJECT/SITE: RAMONA
SAMPLER(S) (Signature): Lebreniere

ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOCs	REMARKS
6/26/06	RA-TI10-W-21387	2-40mL	✓	
6/25/06	RA-TI11-W-21361		✓	
6/26/06	RA-TI09-W-21399		✓	
6/25/06	RA-TI10-W-21364		✓	
6/26/06	RA-TI06-W-21398		✓	
6/26/06	RA-TI11-W-21396		✓	
6/25/06	RA-TI07-W-21363		✓	
6/26/06	RA-TI10-W-21390		✓	
6/26/06	RA-TI07-W-21400		✓	
6/27/06	RA-TB01-W-62706		✓	

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Jorge Alvarez	6/27/06	2:40p			6/28/06	10:10 a.m.	

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
						Cooler 2°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

00804

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI10-W-21387

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-01

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC414

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI10-W-21387

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-01

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC414

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RA-TI10-W-21387

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-01

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC414

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.61	5.3	J
2.		UNKNOWN	2.83	6.0	J
3.		UNKNOWN	3.18	5.0	JB
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI11-W-21361

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-02

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC408

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI11-W-21361

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-02

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC408

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RA-TI11-W-21361

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-02

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC408

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI09-W-21399

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-03

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC409

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	23	
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI09-W-21399

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-03

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC409

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

RA-TI09-W-21399

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-03

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC409

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	463-49-0	1,2-PROPADIENE	2.07	5.6	NJ
2.					
3.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI10-W-21364

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-04

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC410

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	2.4	J
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	27	
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI10-W-21364

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-04

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC410

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RA-TI10-W-21364

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-04

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC410

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI06-W-21398

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-05

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC413

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	4.6	J
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI06-W-21398

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-05

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC413

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RA-TI06-W-21398

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-05

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC413

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI11-W-21396

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-06

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC416

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	4.5	J
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	1.2	J
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI11-W-21396

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-06

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC416

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

RA-TI11-W-21396

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-06

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC416

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

RA-TI07-W-21363

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-07

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC415

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.7	J
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	1.0	J
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI07-W-21363

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-07

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC415

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

RA-TI07-W-21363

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-07

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC415

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI10-W-21390

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-08

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC411

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI10-W-21390

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-08

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC411

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RA-TI10-W-21390

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-08

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC411

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
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7.					
8.					
9.					
10.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI07-W-21400

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-09

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC412

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	4.3	J
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.3	J
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TI07-W-21400

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-09

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC412

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

RA-TI07-W-21400

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-09

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC412

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.20	8.8	J
2.					
3.					
4.					
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TB01-W-62706

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-10

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC418

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-Pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RA-TB01-W-62706

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-10

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC418

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

RA-TB01-W-62706

Lab Name: ENVIROSYSTEMS, INC. Contract: ARGONNE

Lab Code: ENVSYS Case No.: ARG0706 SAS No.: SDG No.: ARG0706

Matrix: (soil/water) WATER Lab Sample ID: 0060609-10

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: AG75HC418

Level: (low/med) LOW Date Received: 06/28/06

% Moisture: not dec. _____ Date Analyzed: 07/05/06

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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30.					

SEVERN TRENT STL

July 27, 2006

STL Burlington
208 South Park Drive, Suite 1
Colchester, VT 05446

Tel: 802 655 1203 Fax: 802 655 1248
www.stl-inc.com

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 203, Office 149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: RAMONA; SDG: 115264

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by STL Burlington on July 12th, 2006. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 07/12/06 ETR No: 115264		
675447	RA-S-21434	07/10/06	LIQUID
675448	RA-S-21462	07/10/06	LIQUID
675449	RA-S-21312	07/10/06	LIQUID
675450	RA-S-21332	07/10/06	LIQUID
675451	RA-S-21289	07/10/06	LIQUID
675452	RA-S-21337	07/10/06	LIQUID
675453	RA-MEOH BLANK	07/10/06	LIQUID

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal. It should be noted that at the time that they were received, the sample volumes were at 7.9 °C.

The samples were analyzed by Method 8260B, using a low-level calibration. In performing the analytical work, 500 microliters of the methanol extract were added to the 5 milliliter purge volume. The analysis of samples RA-MEOH BLANK and RA-S-21462 did yield a low recovery of one of the surrogate controls, 1,2-dichlorobenzene-d_4. The recovery in the analysis of sample RA-MEOH BLANK was 59 percent, while that in the analysis of sample RA-S-21462 was 78 percent. There was good internal standard stability in each of the analyses associated with the sample set. Two types of laboratory control sample analyses were performed as part of the analytical sequence. One was performed to evaluate method performance, and one was performed with 500 microliters of methanol added to the purge volume in order to characterize the affect on the analytical process. The target analytes were recovered well in the laboratory control sample analysis that defined the method performance. In the laboratory control sample analysis with methanol, several of the earlier eluting compounds did exhibit lower recoveries. Most profoundly affected was the performance of bromomethane, trichlorofluoromethane, acrolein, acetone, methyl iodide, allyl chloride, and methylene chloride, for which the derived recovery

values were below 20 percent. Chloroform and carbon tetrachloride were recovered well in each of the laboratory control sample analyses. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. The analysis of the instrument blank that was analyzed in association with the samples was free of contamination. The analysis of sample RA-MEOH BLANK did yield trace concentrations of 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and1,2,3-trichlorobenzene. The presence of those compounds in that analysis were likely the result of carryover from the laboratory control sample analysis that preceded that acquisition.

If there are any questions regarding this submittal, please contact me at (802) 655-1203.
The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 655-1203.

Sincerely,

Kirk F. Young
Project Manager

Enclosure
KHY/hsf

STL Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: Greater than 40% difference for detected concentrations between two GC columns. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P	ICP-AES
MS	ICP-MS
CV	Cold Vapor AA
AS	Semi-Automated Spectrophotometric

MATRIX: Soil in Methanol
RECEIVING LAB: STL-Burlington
PROJECT/SITE: RAMONA/KS
SAMPLER(S) (Signature): dafreniere

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS	REMARKS
				mass (g)
7/10/06	RA-S-21434 (10A)	1-20mL		14.597
	RA-S-21462 (10A)			10.482
	RA-S-21312 (10A)			12.210
	RA-S-21332 (20A)			9.279
	RA-S-21289 (19A)			12.172
	RA-S-21337 (10A)			10.646
	RA-MeOH Blank			—

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Joyce Spencer	7/11/06	10am					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
M Lupin	07/11/06	9:45AM	Joann Destin	07/12/06	0930	

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
□	X	Shipment was at required temperature when received.
△	X	Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

△ The Sample Container labels do not include RA-S- as found on COC.
□ Cooler received at 7.9°C
△ No dates found on Sample Container labels. Used dates from COC for login.
△ Container labels include dup1 for all samples not found on COC.

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21289

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675451

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 675451

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.2	U
74-87-3	Chloromethane	8.2	U
75-01-4	Vinyl Chloride	8.2	U
74-83-9	Bromomethane	8.2	U
75-00-3	Chloroethane	8.2	U
75-69-4	Trichlorofluoromethane	8.2	U
107-02-8	Acrolein	41	U
75-35-4	1,1-Dichloroethene	8.2	U
76-13-1	Freon TF	8.2	U
67-64-1	Acetone	41	U
74-88-4	Methyl Iodide	8.2	U
75-15-0	Carbon Disulfide	8.2	U
107-05-1	Allyl Chloride	8.2	U
75-09-2	Methylene Chloride	8.2	U
107-13-1	Acrylonitrile	8.2	U
156-60-5	trans-1,2-Dichloroethene	8.2	U
1634-04-4	Methyl-t-Butyl Ether	8.2	U
540-59-0	1,2-Dichloroethene (total)	8.2	U
75-34-3	1,1-Dichloroethane	8.2	U
108-05-4	Vinyl Acetate	8.2	U
126-99-8	Chloroprene	8.2	U
594-20-7	2,2-Dichloropropane	8.2	U
156-59-2	cis-1,2-Dichloroethene	8.2	U
78-93-3	2-Butanone	3300	E
107-12-0	Propionitrile	33	U
74-97-5	Bromochloromethane	8.2	U
126-98-7	Methacrylonitrile	8.2	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	3.7	J
71-55-6	1,1,1-Trichloroethane	8.2	U
56-23-5	Carbon Tetrachloride	8.2	U
563-58-6	1,1-Dichloropropene	8.2	U
71-43-2	Benzene	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21289

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675451

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 675451

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	410	U
107-06-2	1,2-Dichloroethane	8.2	U
79-01-6	Trichloroethene	8.2	U
78-87-5	1,2-Dichloropropane	8.2	U
74-95-3	Dibromomethane	8.2	U
80-62-6	Methyl Methacrylate	8.2	U
123-91-1	1,4-Dioxane	410	U
75-27-4	Bromodichloromethane	8.2	U
110-75-8	2-Chloroethyl Vinyl Ether	8.2	U
10061-01-5	cis-1,3-Dichloropropene	8.2	U
108-10-1	4-Methyl-2-pentanone	41	U
108-88-3	Toluene	8.2	U
10061-02-6	trans-1,3-Dichloropropene	8.2	U
97-63-2	Ethyl Methacrylate	8.2	U
79-00-5	1,1,2-Trichloroethane	8.2	U
127-18-4	Tetrachloroethene	8.2	U
142-28-9	1,3-Dichloropropane	8.2	U
591-78-6	2-Hexanone	41	U
124-48-1	Dibromochloromethane	8.2	U
106-93-4	1,2-Dibromoethane	8.2	U
108-90-7	Chlorobenzene	8.2	U
630-20-6	1,1,1,2-Tetrachloroethane	8.2	U
100-41-4	Ethylbenzene	3.9	J
1330-20-7	Xylene (m,p)	18	
95-47-6	Xylene (o)	6.5	J
1330-20-7	Xylene (total)	24	
100-42-5	Styrene	8.2	U
75-25-2	Bromoform	8.2	U
98-82-8	Isopropylbenzene	8.2	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.2	U
108-86-1	Bromobenzene	8.2	U
79-34-5	1,1,2,2-Tetrachloroethane	8.2	U
96-18-4	1,2,3-Trichloropropane	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21289

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675451

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 675451

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.2	U
103-65-1	n-Propylbenzene	8.2	U
95-49-8	2-Chlorotoluene	8.2	U
106-43-4	4-Chlorotoluene	8.2	U
108-67-8	1,3,5-Trimethylbenzene	8.2	U
98-06-6	tert-Butylbenzene	8.2	U
95-63-6	1,2,4-Trimethylbenzene	8.2	U
135-98-8	sec-Butylbenzene	8.2	U
541-73-1	1,3-Dichlorobenzene	8.2	U
99-87-6	4-Isopropyltoluene	8.2	U
106-46-7	1,4-Dichlorobenzene	8.2	U
95-50-1	1,2-Dichlorobenzene	8.2	U
104-51-8	n-Butylbenzene	8.2	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.2	U
120-82-1	1,2,4-Trichlorobenzene	8.2	U
87-68-3	Hexachlorobutadiene	8.2	U
91-20-3	Naphthalene	8.2	U
87-61-6	1,2,3-Trichlorobenzene	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21312

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675449

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 675449

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.2	U
74-87-3	Chloromethane	8.2	U
75-01-4	Vinyl Chloride	8.2	U
74-83-9	Bromomethane	8.2	U
75-00-3	Chloroethane	8.2	U
75-69-4	Trichlorofluoromethane	8.2	U
107-02-8	Acrolein	41	U
75-35-4	1,1-Dichloroethene	8.2	U
76-13-1	Freon TF	8.2	U
67-64-1	Acetone	41	U
74-88-4	Methyl Iodide	8.2	U
75-15-0	Carbon Disulfide	8.2	U
107-05-1	Allyl Chloride	8.2	U
75-09-2	Methylene Chloride	8.2	U
107-13-1	Acrylonitrile	8.2	U
156-60-5	trans-1,2-Dichloroethene	8.2	U
1634-04-4	Methyl-t-Butyl Ether	8.2	U
540-59-0	1,2-Dichloroethene (total)	8.2	U
75-34-3	1,1-Dichloroethane	8.2	U
108-05-4	Vinyl Acetate	8.2	U
126-99-8	Chloroprene	8.2	U
594-20-7	2,2-Dichloropropane	8.2	U
156-59-2	cis-1,2-Dichloroethene	8.2	U
78-93-3	2-Butanone	3500	E
107-12-0	Propionitrile	33	U
74-97-5	Bromochloromethane	8.2	U
126-98-7	Methacrylonitrile	8.2	U
109-99-9	Tetrahydrofuran	110	U
67-66-3	Chloroform	4.8	J
71-55-6	1,1,1-Trichloroethane	8.2	U
56-23-5	Carbon Tetrachloride	8.2	U
563-58-6	1,1-Dichloropropene	8.2	U
71-43-2	Benzene	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21312

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675449

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 675449

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	410	U
107-06-2	1,2-Dichloroethane	8.2	U
79-01-6	Trichloroethene	8.2	U
78-87-5	1,2-Dichloropropane	8.2	U
74-95-3	Dibromomethane	8.2	U
80-62-6	Methyl Methacrylate	8.2	U
123-91-1	1,4-Dioxane	410	U
75-27-4	Bromodichloromethane	8.2	U
110-75-8	2-Chloroethyl Vinyl Ether	8.2	U
10061-01-5	cis-1,3-Dichloropropene	8.2	U
108-10-1	4-Methyl-2-pentanone	41	U
108-88-3	Toluene	8.2	U
10061-02-6	trans-1,3-Dichloropropene	8.2	U
97-63-2	Ethyl Methacrylate	8.2	U
79-00-5	1,1,2-Trichloroethane	8.2	U
127-18-4	Tetrachloroethene	8.2	U
142-28-9	1,3-Dichloropropane	8.2	U
591-78-6	2-Hexanone	41	U
124-48-1	Dibromochloromethane	8.2	U
106-93-4	1,2-Dibromoethane	8.2	U
108-90-7	Chlorobenzene	8.2	U
630-20-6	1,1,1,2-Tetrachloroethane	8.2	U
100-41-4	Ethylbenzene	4.5	J
1330-20-7	Xylene (m,p)	20	
95-47-6	Xylene (o)	7.9	J
1330-20-7	Xylene (total)	28	
100-42-5	Styrene	8.2	U
75-25-2	Bromoform	8.2	U
98-82-8	Isopropylbenzene	8.2	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.2	U
108-86-1	Bromobenzene	8.2	U
79-34-5	1,1,2,2-Tetrachloroethane	8.2	U
96-18-4	1,2,3-Trichloropropane	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21312

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675449

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 675449

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.2	U
103-65-1	n-Propylbenzene	8.2	U
95-49-8	2-Chlorotoluene	8.2	U
106-43-4	4-Chlorotoluene	8.2	U
108-67-8	1,3,5-Trimethylbenzene	8.2	U
98-06-6	tert-Butylbenzene	8.2	U
95-63-6	1,2,4-Trimethylbenzene	8.2	U
135-98-8	sec-Butylbenzene	8.2	U
541-73-1	1,3-Dichlorobenzene	8.2	U
99-87-6	4-Isopropyltoluene	8.2	U
106-46-7	1,4-Dichlorobenzene	8.2	U
95-50-1	1,2-Dichlorobenzene	8.2	U
104-51-8	n-Butylbenzene	8.2	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.2	U
120-82-1	1,2,4-Trichlorobenzene	8.2	U
87-68-3	Hexachlorobutadiene	8.2	U
91-20-3	Naphthalene	8.2	U
87-61-6	1,2,3-Trichlorobenzene	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21332

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675450

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 675450

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl Chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
107-02-8	Acrolein	53	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	Freon TF	11	U
67-64-1	Acetone	53	U
74-88-4	Methyl Iodide	11	U
75-15-0	Carbon Disulfide	11	U
107-05-1	Allyl Chloride	11	U
75-09-2	Methylene Chloride	11	U
107-13-1	Acrylonitrile	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl-t-Butyl Ether	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
75-34-3	1,1-Dichloroethane	11	U
108-05-4	Vinyl Acetate	11	U
126-99-8	Chloroprene	11	U
594-20-7	2,2-Dichloropropane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	4900	E
107-12-0	Propionitrile	43	U
74-97-5	Bromochloromethane	11	U
126-98-7	Methacrylonitrile	11	U
109-99-9	Tetrahydrofuran	150	U
67-66-3	Chloroform	4.8	J
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
563-58-6	1,1-Dichloropropene	11	U
71-43-2	Benzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21332

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675450

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 675450

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	540	U
107-06-2	1,2-Dichloroethane	11	U
79-01-6	Trichloroethene	11	U
78-87-5	1,2-Dichloropropane	11	U
74-95-3	Dibromomethane	11	U
80-62-6	Methyl Methacrylate	11	U
123-91-1	1,4-Dioxane	540	U
75-27-4	Bromodichloromethane	11	U
110-75-8	2-Chloroethyl Vinyl Ether	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-pentanone	53	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
97-63-2	Ethyl Methacrylate	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
142-28-9	1,3-Dichloropropane	11	U
591-78-6	2-Hexanone	53	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
630-20-6	1,1,1,2-Tetrachloroethane	11	U
100-41-4	Ethylbenzene	5.4	J
1330-20-7	Xylene (m,p)	23	
95-47-6	Xylene (o)	8.5	J
1330-20-7	Xylene (total)	32	
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
1476-11-5	cis-1,4-Dichloro-2-butene	11	U
108-86-1	Bromobenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
96-18-4	1,2,3-Trichloropropane	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21332

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675450

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 675450

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	11	U
103-65-1	n-Propylbenzene	11	U
95-49-8	2-Chlorotoluene	11	U
106-43-4	4-Chlorotoluene	11	U
108-67-8	1,3,5-Trimethylbenzene	11	U
98-06-6	tert-Butylbenzene	11	U
95-63-6	1,2,4-Trimethylbenzene	11	U
135-98-8	sec-Butylbenzene	11	U
541-73-1	1,3-Dichlorobenzene	11	U
99-87-6	4-Isopropyltoluene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
104-51-8	n-Butylbenzene	11	U
96-12-8	1,2-Dibromo-3-Chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
87-68-3	Hexachlorobutadiene	11	U
91-20-3	Naphthalene	11	U
87-61-6	1,2,3-Trichlorobenzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21337

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675452

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 675452

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.4	U
74-87-3	Chloromethane	9.4	U
75-01-4	Vinyl Chloride	9.4	U
74-83-9	Bromomethane	9.4	U
75-00-3	Chloroethane	9.4	U
75-69-4	Trichlorofluoromethane	9.4	U
107-02-8	Acrolein	47	U
75-35-4	1,1-Dichloroethene	9.4	U
76-13-1	Freon TF	9.4	U
67-64-1	Acetone	47	U
74-88-4	Methyl Iodide	9.4	U
75-15-0	Carbon Disulfide	9.4	U
107-05-1	Allyl Chloride	9.4	U
75-09-2	Methylene Chloride	9.4	U
107-13-1	Acrylonitrile	9.4	U
156-60-5	trans-1,2-Dichloroethene	9.4	U
1634-04-4	Methyl-t-Butyl Ether	9.4	U
540-59-0	1,2-Dichloroethene (total)	9.4	U
75-34-3	1,1-Dichloroethane	9.4	U
108-05-4	Vinyl Acetate	9.4	U
126-99-8	Chloroprene	9.4	U
594-20-7	2,2-Dichloropropane	9.4	U
156-59-2	cis-1,2-Dichloroethene	9.4	U
78-93-3	2-Butanone	3300	E
107-12-0	Propionitrile	38	U
74-97-5	Bromochloromethane	9.4	U
126-98-7	Methacrylonitrile	9.4	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	4.1	J
71-55-6	1,1,1-Trichloroethane	9.4	U
56-23-5	Carbon Tetrachloride	9.4	U
563-58-6	1,1-Dichloropropene	9.4	U
71-43-2	Benzene	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21337

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675452

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 675452

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	470	U
107-06-2	1,2-Dichloroethane	9.4	U
79-01-6	Trichloroethene	9.4	U
78-87-5	1,2-Dichloropropane	9.4	U
74-95-3	Dibromomethane	9.4	U
80-62-6	Methyl Methacrylate	9.4	U
123-91-1	1,4-Dioxane	470	U
75-27-4	Bromodichloromethane	9.4	U
110-75-8	2-Chloroethyl Vinyl Ether	9.4	U
10061-01-5	cis-1,3-Dichloropropene	9.4	U
108-10-1	4-Methyl-2-pentanone	47	U
108-88-3	Toluene	9.4	U
10061-02-6	trans-1,3-Dichloropropene	9.4	U
97-63-2	Ethyl Methacrylate	9.4	U
79-00-5	1,1,2-Trichloroethane	9.4	U
127-18-4	Tetrachloroethene	9.4	U
142-28-9	1,3-Dichloropropane	9.4	U
591-78-6	2-Hexanone	47	U
124-48-1	Dibromochloromethane	9.4	U
106-93-4	1,2-Dibromoethane	9.4	U
108-90-7	Chlorobenzene	9.4	U
630-20-6	1,1,1,2-Tetrachloroethane	9.4	U
100-41-4	Ethylbenzene	4.4	J
1330-20-7	Xylene (m,p)	18	
95-47-6	Xylene (o)	7.4	J
1330-20-7	Xylene (total)	25	
100-42-5	Styrene	9.4	U
75-25-2	Bromoform	9.4	U
98-82-8	Isopropylbenzene	9.4	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.4	U
108-86-1	Bromobenzene	9.4	U
79-34-5	1,1,2,2-Tetrachloroethane	9.4	U
96-18-4	1,2,3-Trichloropropane	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21337

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675452

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 675452

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.4	U
103-65-1	n-Propylbenzene	9.4	U
95-49-8	2-Chlorotoluene	9.4	U
106-43-4	4-Chlorotoluene	9.4	U
108-67-8	1,3,5-Trimethylbenzene	9.4	U
98-06-6	tert-Butylbenzene	9.4	U
95-63-6	1,2,4-Trimethylbenzene	9.4	U
135-98-8	sec-Butylbenzene	9.4	U
541-73-1	1,3-Dichlorobenzene	9.4	U
99-87-6	4-Isopropyltoluene	9.4	U
106-46-7	1,4-Dichlorobenzene	9.4	U
95-50-1	1,2-Dichlorobenzene	9.4	U
104-51-8	n-Butylbenzene	9.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.4	U
120-82-1	1,2,4-Trichlorobenzene	9.4	U
87-68-3	Hexachlorobutadiene	9.4	U
91-20-3	Naphthalene	9.4	U
87-61-6	1,2,3-Trichlorobenzene	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21434

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675447

Sample wt/vol: 14.6 (g/mL) G Lab File ID: 675447

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.8	U
74-87-3	Chloromethane	6.8	U
75-01-4	Vinyl Chloride	6.8	U
74-83-9	Bromomethane	6.8	U
75-00-3	Chloroethane	6.8	U
75-69-4	Trichlorofluoromethane	6.8	U
107-02-8	Acrolein	34	U
75-35-4	1,1-Dichloroethene	6.8	U
76-13-1	Freon TF	6.8	U
67-64-1	Acetone	34	U
74-88-4	Methyl Iodide	6.8	U
75-15-0	Carbon Disulfide	6.8	U
107-05-1	Allyl Chloride	6.8	U
75-09-2	Methylene Chloride	6.8	U
107-13-1	Acrylonitrile	6.8	U
156-60-5	trans-1,2-Dichloroethene	6.8	U
1634-04-4	Methyl-t-Butyl Ether	6.8	U
540-59-0	1,2-Dichloroethene (total)	6.8	U
75-34-3	1,1-Dichloroethane	6.8	U
108-05-4	Vinyl Acetate	6.8	U
126-99-8	Chloroprene	6.8	U
594-20-7	2,2-Dichloropropane	6.8	U
156-59-2	cis-1,2-Dichloroethene	6.8	U
78-93-3	2-Butanone	88	
107-12-0	Propionitrile	27	U
74-97-5	Bromochloromethane	6.8	U
126-98-7	Methacrylonitrile	6.8	U
109-99-9	Tetrahydrofuran	96	U
67-66-3	Chloroform	6.8	U
71-55-6	1,1,1-Trichloroethane	6.8	U
56-23-5	Carbon Tetrachloride	6.8	U
563-58-6	1,1-Dichloropropene	6.8	U
71-43-2	Benzene	6.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21434

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675447

Sample wt/vol: 14.6 (g/mL) G Lab File ID: 675447

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	340	U
107-06-2	1,2-Dichloroethane	6.8	U
79-01-6	Trichloroethene	6.8	U
78-87-5	1,2-Dichloropropane	6.8	U
74-95-3	Dibromomethane	6.8	U
80-62-6	Methyl Methacrylate	6.8	U
123-91-1	1,4-Dioxane	340	U
75-27-4	Bromodichloromethane	6.8	U
110-75-8	2-Chloroethyl Vinyl Ether	6.8	U
10061-01-5	cis-1,3-Dichloropropene	6.8	U
108-10-1	4-Methyl-2-pentanone	34	U
108-88-3	Toluene	2.0	J
10061-02-6	trans-1,3-Dichloropropene	6.8	U
97-63-2	Ethyl Methacrylate	6.8	U
79-00-5	1,1,2-Trichloroethane	6.8	U
127-18-4	Tetrachloroethene	6.8	U
142-28-9	1,3-Dichloropropane	6.8	U
591-78-6	2-Hexanone	34	U
124-48-1	Dibromochloromethane	6.8	U
106-93-4	1,2-Dibromoethane	6.8	U
108-90-7	Chlorobenzene	6.8	U
630-20-6	1,1,1,2-Tetrachloroethane	6.8	U
100-41-4	Ethylbenzene	6.8	U
1330-20-7	Xylene (m,p)	4.6	J
95-47-6	Xylene (o)	3.0	J
1330-20-7	Xylene (total)	7.7	
100-42-5	Styrene	6.8	U
75-25-2	Bromoform	6.8	U
98-82-8	Isopropylbenzene	6.8	U
1476-11-5	cis-1,4-Dichloro-2-butene	6.8	U
108-86-1	Bromobenzene	6.8	U
79-34-5	1,1,2,2-Tetrachloroethane	6.8	U
96-18-4	1,2,3-Trichloropropane	6.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21434

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675447

Sample wt/vol: 14.6 (g/mL) G Lab File ID: 675447

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	6.8	U
103-65-1	n-Propylbenzene	6.8	U
95-49-8	2-Chlorotoluene	6.8	U
106-43-4	4-Chlorotoluene	6.8	U
108-67-8	1,3,5-Trimethylbenzene	6.8	U
98-06-6	tert-Butylbenzene	6.8	U
95-63-6	1,2,4-Trimethylbenzene	6.8	U
135-98-8	sec-Butylbenzene	6.8	U
541-73-1	1,3-Dichlorobenzene	6.8	U
99-87-6	4-Isopropyltoluene	6.8	U
106-46-7	1,4-Dichlorobenzene	6.8	U
95-50-1	1,2-Dichlorobenzene	6.8	U
104-51-8	n-Butylbenzene	6.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.8	U
120-82-1	1,2,4-Trichlorobenzene	6.8	U
87-68-3	Hexachlorobutadiene	6.8	U
91-20-3	Naphthalene	6.8	U
87-61-6	1,2,3-Trichlorobenzene	6.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21462

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675448

Sample wt/vol: 10.5 (g/mL) G Lab File ID: 675448

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.5	U
74-87-3	Chloromethane	9.5	U
75-01-4	Vinyl Chloride	9.5	U
74-83-9	Bromomethane	9.5	U
75-00-3	Chloroethane	9.5	U
75-69-4	Trichlorofluoromethane	9.5	U
107-02-8	Acrolein	47	U
75-35-4	1,1-Dichloroethene	9.5	U
76-13-1	Freon TF	9.5	U
67-64-1	Acetone	47	U
74-88-4	Methyl Iodide	9.5	U
75-15-0	Carbon Disulfide	9.5	U
107-05-1	Allyl Chloride	9.5	U
75-09-2	Methylene Chloride	9.5	U
107-13-1	Acrylonitrile	9.5	U
156-60-5	trans-1,2-Dichloroethene	9.5	U
1634-04-4	Methyl-t-Butyl Ether	9.5	U
540-59-0	1,2-Dichloroethene (total)	9.5	U
75-34-3	1,1-Dichloroethane	9.5	U
108-05-4	Vinyl Acetate	9.5	U
126-99-8	Chloroprene	9.5	U
594-20-7	2,2-Dichloropropane	9.5	U
156-59-2	cis-1,2-Dichloroethene	9.5	U
78-93-3	2-Butanone	63	
107-12-0	Propionitrile	38	U
74-97-5	Bromochloromethane	9.5	U
126-98-7	Methacrylonitrile	9.5	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	9.5	U
71-55-6	1,1,1-Trichloroethane	9.5	U
56-23-5	Carbon Tetrachloride	6.7	J
563-58-6	1,1-Dichloropropene	9.5	U
71-43-2	Benzene	9.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21462

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675448

Sample wt/vol: 10.5 (g/mL) G Lab File ID: 675448

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	480	U
107-06-2	1,2-Dichloroethane	9.5	U
79-01-6	Trichloroethene	9.5	U
78-87-5	1,2-Dichloropropane	9.5	U
74-95-3	Dibromomethane	9.5	U
80-62-6	Methyl Methacrylate	9.5	U
123-91-1	1,4-Dioxane	480	U
75-27-4	Bromodichloromethane	9.5	U
110-75-8	2-Chloroethyl Vinyl Ether	9.5	U
10061-01-5	cis-1,3-Dichloropropene	9.5	U
108-10-1	4-Methyl-2-pentanone	47	U
108-88-3	Toluene	2.2	J
10061-02-6	trans-1,3-Dichloropropene	9.5	U
97-63-2	Ethyl Methacrylate	9.5	U
79-00-5	1,1,2-Trichloroethane	9.5	U
127-18-4	Tetrachloroethene	9.5	U
142-28-9	1,3-Dichloropropane	9.5	U
591-78-6	2-Hexanone	47	U
124-48-1	Dibromochloromethane	9.5	U
106-93-4	1,2-Dibromoethane	9.5	U
108-90-7	Chlorobenzene	9.5	U
630-20-6	1,1,1,2-Tetrachloroethane	9.5	U
100-41-4	Ethylbenzene	9.5	U
1330-20-7	Xylene (m,p)	3.6	J
95-47-6	Xylene (o)	9.5	U
1330-20-7	Xylene (total)	3.7	J
100-42-5	Styrene	9.5	U
75-25-2	Bromoform	9.5	U
98-82-8	Isopropylbenzene	9.5	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.5	U
108-86-1	Bromobenzene	9.5	U
79-34-5	1,1,2,2-Tetrachloroethane	9.5	U
96-18-4	1,2,3-Trichloropropane	9.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-S-21462

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675448

Sample wt/vol: 10.5 (g/mL) G Lab File ID: 675448

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.5	U
103-65-1	n-Propylbenzene	9.5	U
95-49-8	2-Chlorotoluene	9.5	U
106-43-4	4-Chlorotoluene	9.5	U
108-67-8	1,3,5-Trimethylbenzene	9.5	U
98-06-6	tert-Butylbenzene	9.5	U
95-63-6	1,2,4-Trimethylbenzene	9.5	U
135-98-8	sec-Butylbenzene	9.5	U
541-73-1	1,3-Dichlorobenzene	9.5	U
99-87-6	4-Isopropyltoluene	9.5	U
106-46-7	1,4-Dichlorobenzene	9.5	U
95-50-1	1,2-Dichlorobenzene	9.5	U
104-51-8	n-Butylbenzene	9.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.5	U
120-82-1	1,2,4-Trichlorobenzene	9.5	U
87-68-3	Hexachlorobutadiene	9.5	U
91-20-3	Naphthalene	9.5	U
87-61-6	1,2,3-Trichlorobenzene	9.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-MEOH BLANK

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675453

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 675453

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	50	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	50	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	50	U
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-MEOH BLANK

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675453

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 675453

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	500	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	500	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	10	U
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

RA-MEOH BLANK

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: RAMONA SAS No.: SDG No.: 115264

Matrix: (soil/water) SOIL Lab Sample ID: 675453

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 675453

Level: (low/med) MED Date Received: 07/12/06

% Moisture: not dec. _____ Date Analyzed: 07/24/06

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	3.2	J
87-68-3	Hexachlorobutadiene	2.9	J
91-20-3	Naphthalene	4.5	J
87-61-6	1,2,3-Trichlorobenzene	4.0	J

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